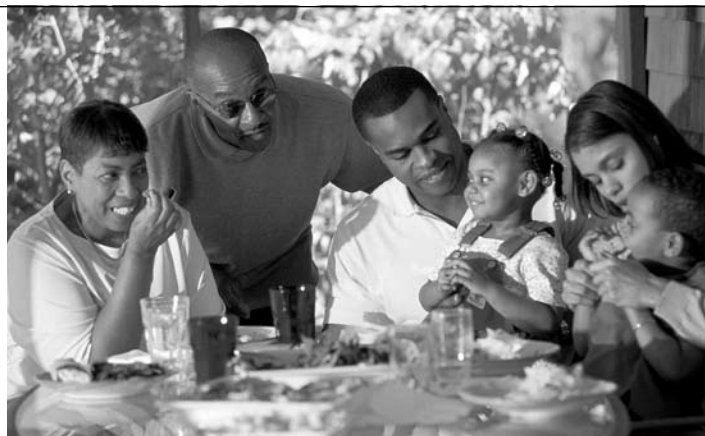


# Cholesterol + diabetes



## HEALTHY NUTRITION AND LIFESTYLE CHOICES

### *Have you had your cholesterol tested lately?*

**Most adults with type 1 or type 2 diabetes are at high risk for cardiovascular diseases such as heart attack and stroke. People with diabetes have an increased risk of these diseases even if their LDL-cholesterol is “normal”. They have an even higher risk if their LDL-cholesterol is elevated.**

**Adults with diabetes should have their cholesterol tested every 1 to 3 years. More frequent testing may be necessary for people taking cholesterol medications. Always discuss your cholesterol results with your doctor and other members of your healthcare team.**

### *Have you been told that you have high cholesterol?*

High cholesterol usually refers to high LDL (“bad”) cholesterol. The main goal is to lower LDL-cholesterol. Most adults need medications (such as a statin) to accomplish this. Weight management, healthy eating and regular physical activity will also help you reach this goal. This pamphlet will help you make healthy choices.

**Diabetes management requires good blood glucose, blood pressure and cholesterol control.**

#### **DEFINITIONS**

**Cholesterol:** a fat substance that is naturally present in your blood and cells. There are two main types of cholesterol: LDL and HDL.

- ◆ **LDL (low-density lipoprotein):** often called “bad” cholesterol because higher levels of LDL can increase the risk of cardiovascular disease.
- ◆ **HDL (high-density lipoprotein):** often called “good” cholesterol because higher levels of HDL can reduce the risk of cardiovascular disease.

**Cardiovascular disease:** damage to the heart and blood vessels. One cause is narrowing of the blood vessels due to fat deposits on the vessel walls, which limits blood flow.

**Total cholesterol to HDL ratio:** a measure of cardiovascular risk calculated by dividing total cholesterol by HDL-cholesterol.

**Triglyceride:** a form of fat that the body makes from sugar, alcohol or other food sources.



## How can I manage my cholesterol through the lifestyle choices I make?

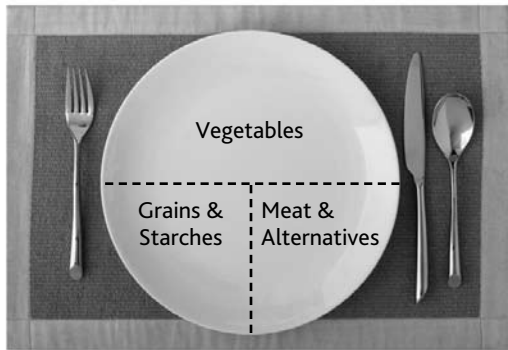
In addition to taking cholesterol medications as prescribed, being at a healthy weight, having healthy eating habits and doing regular physical activity help you manage cholesterol and reduce your risk of developing cardiovascular disease.

### Main goal: Lowering LDL-cholesterol

LDL TARGET: 2.0 mmol/L OR LOWER

MY LDL:

### Healthy eating



### Tips

- ◆ Choose lower-fat foods
- ◆ Limit saturated fats
- ◆ Avoid trans fats
- ◆ Limit food sources of cholesterol
- ◆ Choose high-fibre foods

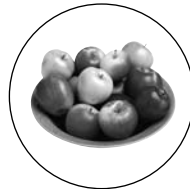
#### Grains & Starches

- ◆ Choose whole grains
- ◆ Choose high-fibre grains, especially those with soluble fibre (such as barley, brown rice, multigrain pasta)
- ◆ Choose low-glycemic index foods



#### Fruits

- ◆ Choose whole and unprocessed fruit for more fibre



#### Milk & Alternatives

- ◆ Choose lower-fat milk (such as skim or 1%) and milk products (such as low-fat yogourt)
- ◆ Choose low-fat milk alternatives such as soy- or rice-based products



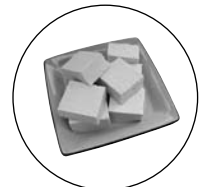
#### Vegetables

- ◆ Choose a variety of colours
- ◆ Choose high-fibre vegetables
- ◆ Choose fresh vegetables, if possible



#### Meat & Alternatives

- ◆ Choose at least 2 meals per week of fatty fish (such as salmon, trout, sardines)
- ◆ Choose plant protein more often (such as tofu, legumes, lentils)
- ◆ Choose lean meats, trim visible fat, remove skin from poultry
- ◆ Choose lower-fat cheese (less than 20% milk fat [MF])





## Body size

A healthy weight is assessed in many ways. Ask your health-care team about your body mass index (BMI), waist measurement and weight goals.

**FACT:** You are at a higher risk if you carry most of your weight around the abdomen.

If you are overweight, losing 5–10% of your current body weight through physical activity and healthy eating can help improve your cholesterol.

My BMI: \_\_\_\_\_

My target BMI: \_\_\_\_\_

My waist measurement: \_\_\_\_\_

My target waist measurement: \_\_\_\_\_

My current weight: \_\_\_\_\_

A 5–10% weight loss: \_\_\_\_\_



## Physical activity

Regular physical activity can help with your overall diabetes management and improve your cardiovascular health. Aim

for at least 150 minutes per week such as one 30-minute session or three 10-minute sessions 5 days per week.

Ask your healthcare team for tips on how to get started and how to maintain regular physical activity.

Ways I can get regular physical activity:

\_\_\_\_\_  
\_\_\_\_\_

## Read the nutrition facts

Look at the label to make healthy food choices

### Nutrition Facts

1 Per 90 g serving (2 slices)

Amount % Daily Value

Calories 170

3 Fat 2.7 g 4 %

Saturated 0.5 g 5 %  
+ Trans 0 g

4 Cholesterol 0 mg

Sodium 200 mg 8 %

Carbohydrate 36 g 13 %

5 Fibre 6 g 24 %

Sugars 3 g

Protein 8 g

Vitamin A 1 % Vitamin C 0 %

Calcium 2 % Iron 16 %

1 Serving size

Compare the serving size on the package to the amount that you eat.

2 % Daily Value (% DV) tells you if there is a little or a lot of nutrient in one serving. Compare similar products. Choose foods with a lower % DV of fat and a higher % DV of fibre.

3 Fat

- ◆ Choose foods with lower fat content.
- ◆ Choose foods with little or no saturated fat.
- ◆ Choose foods with no trans fat.

4 Cholesterol

- ◆ Choose foods with little or no cholesterol.
- ◆ Aim for less than 200 mg of cholesterol per day.

5 Fibre

- ◆ Choose foods high in fibre.
- ◆ Aim for 25 g or more of fibre per day.

Read the **Ingredient List** on food packages. Avoid foods containing these fats:

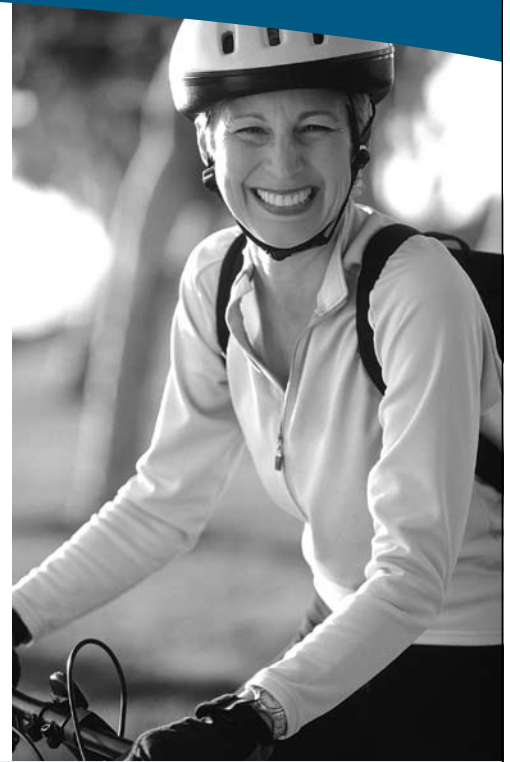
- ◆ Hydrogenated or partially hydrogenated oil, shortening.
- ◆ Tropical fats such as coconut, palm, palm kernel.

For more information on food labels, visit [www.healthyeatingisinstore.ca](http://www.healthyeatingisinstore.ca).

## Am I doing all I can to lower my LDL?

Am I ready to do more for my cardiovascular health? I'll review my LDL-lowering goals before moving on to the next steps:

I am taking my cholesterol medication(s) as prescribed by my doctor.	YES	NO
	<input type="checkbox"/>	<input type="checkbox"/>
My weight is in the healthy range.	<input type="checkbox"/>	<input type="checkbox"/>
My waist measurement is in the healthy range.	<input type="checkbox"/>	<input type="checkbox"/>
I have healthy eating habits:		
I choose low-fat foods and avoid saturated and trans fat.	<input type="checkbox"/>	<input type="checkbox"/>
I limit cholesterol-containing foods.	<input type="checkbox"/>	<input type="checkbox"/>
I make high-fibre choices (such as whole grains).	<input type="checkbox"/>	<input type="checkbox"/>
I eat enough vegetables and fruit servings every day.	<input type="checkbox"/>	<input type="checkbox"/>
I am physically active on a regular basis.	<input type="checkbox"/>	<input type="checkbox"/>



## Next goals:

To lower my total cholesterol to HDL ratio and triglyceride level

**Total cholesterol to HDL ratio goal: less than 4.0**

Ask your doctor or healthcare team for your ratio.

MY RATIO:

One way to lower your ratio is to raise your HDL. You may increase your HDL by choosing small amounts of the following unsaturated fat sources instead of saturated and trans fats:

- ◆ Vegetable oils: canola, olive, peanut
- ◆ Soft non-hydrogenated margarine
- ◆ Olives, avocados
- ◆ Nuts and seeds such as peanuts, almonds, ground flax

If your triglyceride level is very high, your doctor may suggest you lower it with medications and lifestyle choices. The following can help improve your triglyceride level:

- ◆ Limit alcohol intake
- ◆ Achieve and maintain a healthy weight
- ◆ Achieve and maintain excellent blood glucose control
- ◆ Limit added sugar and low-fibre foods such as regular pop, candy, sugar-sweetened cereals

## The bottom line

**Having diabetes increases your cardiovascular risk. Talk to your doctor and healthcare team about ways to improve your cholesterol and lower your risk!**

*The Canadian Diabetes Association works in communities across the country to promote the health of Canadians and eliminate diabetes through our strong nationwide network of volunteers, employees, healthcare professionals, researchers, partners and supporters. In the struggle against this global epidemic, our expertise is recognized around the world. The Canadian Diabetes Association: setting the world standard.*

