Carbohydrate counting guide for people living with diabetes

Simplified method

Votre gouvernement

Québec

Carbohydrate counting guide for people living with diabetes

Simplified method

PRODUCED BY

The Direction des communications, Ministère de la Santé et des Services sociaux

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Diabetes Québec's mission is to enhance the well-being of people with diabetes by providing them with support.

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This document replaces *Meal Planning for People with Diabetes*.
The exchange system is replaced by carbohydrate counting
in order to better meet the needs of people living with diabetes.

We would like to thank everyone who participated
in developing the new version of the guide.

Foreword

Diet is essential in the treatment of diabetes in order to achieve and maintain target blood glucose values, or blood sugar levels.

The goal of this guide is to help people living with diabetes count the carbohydrates in their diet while respecting the principles of a healthy, balanced diet.

There are two methods of counting carbohydrates: simplified and advanced. The simplified method involves counting the approximate amount of carbohydrates, that is, by food serving that provides around 15 g of carbohydrates. The advanced method involves counting the exact amount of carbohydrates in order to adjust insulin doses accordingly. In the following pages, the **simplified method is described**.

The guide is intended for the general population living with diabetes. Some recommendations may not apply to you. For more details, speak to your health care team, in particular your dietitian-nutritionist.

Table of contents

Some diet basics

Before you read the guide, we recommend you read the brochure ***A closer look: Diet for people living with diabetes***, also published by the Ministère de la Santé et des Services sociaux (MSSS). It explains the basic dietary principles for people living with diabetes.

Essential reminders

Carbohydrates

Although they have a direct effect on blood sugar, carbohydrates are the body's main source of energy and are part of a balanced diet. They must not be eliminated from the diet.

Carbohydrates are found in foods in the form of sugars, starches and fibre. Sugars and starches increase blood sugar. Fibre does not increase blood sugar and helps slow the rise in blood sugar after meals.

So choose foods that contain fibre.

Fats

Fats, also known as lipids, are divided into two main categories:

- Heart-healthy fats. They include monounsaturated and polyunsaturated fats.
- Fats that, when eaten in large amounts, may negatively impact heart health. They include saturated and trans fats.

Choose heart-healthy fats.

Protein

Protein does not increase blood sugar. It also helps manage diabetes better, since it:

- makes you feel full;
- helps slow the rise in blood sugar after a meal;
- helps prevent hypoglycemia in people who are at risk.

Have a source of protein at every meal of the day and at snack time.

Salt

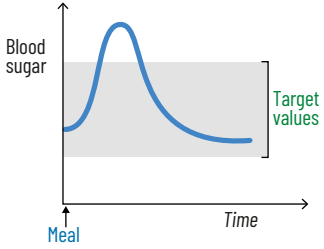
Salt, also called sodium, contributes to high blood pressure and the development of heart and kidney disease if consumed in large amounts.

Choose foods that contain little or no added salt.

How nutrients affect blood sugar

Fibre, protein and fat can alter the effect of carbohydrates on blood sugar.

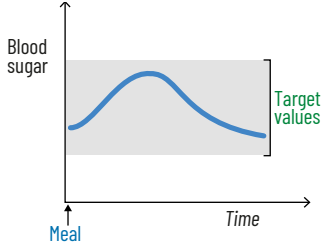
A meal that is mainly made up of carbohydrates leads to a rapid and significant rise in blood sugar.



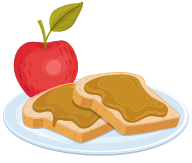
For example:

2 slices of white bread (30 g of carbohydrates)
15 mL (1 Tbsp.) of jam (15 g of carbohydrates)
Total: 45 g of carbohydrates

A meal that respects the principles of a balanced plate made up of foods that contain carbohydrates, fibre, protein and fat results in a slower and less significant rise in blood sugar.



For example:



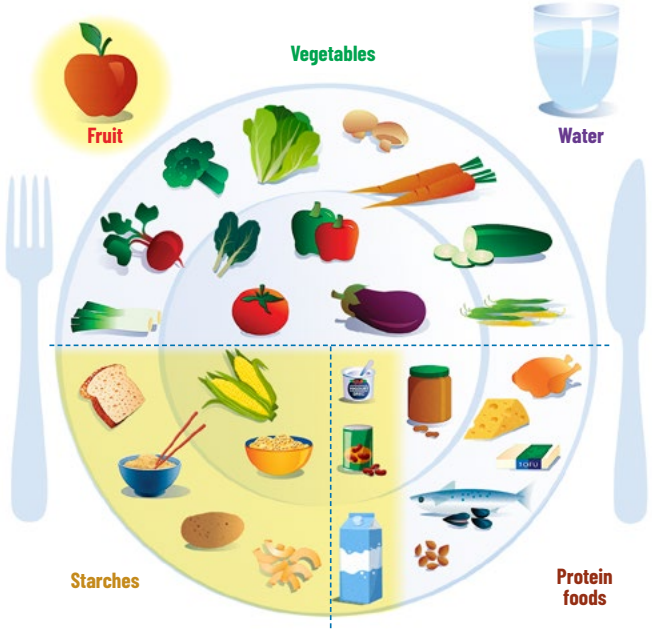
2 slices of **whole grain** bread (30 g of carbohydrates)
*=> Source of **fibre***
Natural **peanut** butter
*=> Source of **protein** and **heart-healthy fat***
1 medium apple with the **peel** (15 g of carbohydrates)
*=> Source of **fibre***
Total: 45 g of carbohydrates

By respecting the principles of a balanced plate, you can distribute nutrients evenly and manage blood sugar levels better after meals.

Balanced plate

The balanced plate is a tool that helps you construct your meals based the principles of a healthy, balanced diet. It also helps ensure carbohydrates are distributed evenly between meals.

The foods in the yellow sections are sources of carbohydrates that increase blood sugar.



This image is taken from the brochure ***A closer look: Diet for people living with diabetes***.

Understanding the guide

For optimal use, the guide should be taught by a dietitian-nutritionist who is a member of the Ordre des diététistes-nutritionnistes du Québec.

Your dietitian-nutritionist will help you determine your carbohydrate needs. A plan is provided on page 59.

Carbohydrate amounts and food servings

The guide provides information on the amount of carbohydrates in **the most common** foods. You can use it to make informed choices and manage your blood sugar.

The amount of carbohydrates is calculated based on an **average** of the products available on the market. **For exact information, refer to the nutrition facts table on the food packaging**.

Important:

- The amount of carbohydrates in each food serving is calculated **by subtracting the fibre** from the total carbohydrate content.
- "Varies" is indicated for the serving size when an average could not be established. In this case, refer to the nutrition facts table on the food packaging.
- In the guide, foods are separated into "foods with carbohydrates" and "foods with little or no carbohydrates." In the simplified carbohydrate counting method, carbohydrates from "foods with little or no carbohydrates" are counted **only** if they are eaten in large amounts or if you want to do a precise carbohydrate count.

Foods that are not in the guide can also be part of a healthy diet.

For a more complete list of the nutrient values of foods, you can consult the ***Canadian Nutrient File*** (CNF) online.

Nutrition labelling

Nutrition facts table

It provides **precise** information about the nutrient content of a store-bought food.

To find out the **amount of carbohydrate** that **increases blood sugar**:

1. Find the **serving size**.
   - This is the serving used to calculate the values in the table.
   - It is not necessarily the serving you are going to eat.
2. Find the **total carbohydrate amount**, in grams (g).
   - It includes all forms of carbohydrates, that is, fibre, sugars and starch. The amount of starch is not mentioned in the nutrition facts table.
3. Subtract the **fibre (g)** from the total carbohydrate amount, since it does not increase blood sugar.

Sugars include added sugars and sugars found naturally in foods. To find out where the sugars come from, refer to the list of ingredients.

Nutrition facts

Per 2 slices (81 g)

Calories 190	
	% Daily Value*
Fat 3 g	4%
Saturated 0.4 g + Trans 0	2%
Carbohydrate 33 g	
Fibre 6 g	21%
Sugars 2 g	2%
Protein 11 g	
Cholesterol 0 mg	
Sodium 360 mg	16%
Potassium 190 mg	4%
Calcium 220 mg	17%
Iron 2.1 mg	12%

*5% or less is **a little**, 15% or more is **a lot**

For 2 slices of bread:

33 g of total carbohydrate
– 6 g of fibre
= 27 g of carbohydrates that increase blood sugar.

List of ingredients

It lists all the ingredients in a store-bought food. The ingredients are listed by weight. The list starts with the ingredient that weighs the most and ends with the ingredient that weighs the least.

Example: breakfast cereal with dried strawberries.

Ingredients: Whole oats • cane sugar • vegetable oil • dehydrated strawberries • natural flavours.

In this example, more sugar comes from cane sugar (added sugar) than from dehydrated strawberries (naturally occurring sugar).

New packaging regulations

Since July 2022, a symbol has appeared on the front of commercial food packaging to identify foods that are high in sodium, sugars or saturated fat. The symbol is intended to help consumers make more informed choices at the grocery store.
The food industry has until January 1, 2026 to make this change.

Food groups and symbols

Food groups

The foods in the guide are classified into five food groups:

Starches, p. 9

Fruits, p. 17

Vegetables, p. 23

Proteins foods, p. 28

Other foods, p. 36

Symbols

Source of fibre

High in heart-healthy fats

High in fat that may negatively impact heart health

High in salt

Starches

Starches include:

- Grains and grain products;
- Vegetables that are high in carbohydrates, also called starchy vegetables.

They are high in **vitamins** and **minerals**. Choose whole grains, whole grain products and starchy vegetables with the skin, since they are high in **fibre** and are more nutritious.

15 g

The **Starches** food group consists mainly of foods **with carbohydrates**. Each serving listed contains 15 g of carbohydrates.

GRAINS AND GRAIN PRODUCTS

Hot and cold breakfast cereals

*Breakfast cereals that contain large amounts of added sugar are classified in the **Other foods** group, page 36.*

All-Bran (Kellogg's®)	
• buds	80 mL (⅓ cup)
• flakes and original	125 mL (½ cup)
Cheerios, multigrain and original (General Mills®)	125 mL (½ cup)
Corn Flakes (Kellogg's®)	125 mL (½ cup)
Cream of Wheat	30 mL (2 Tbsp.)
Puffed wheat	375 mL (1 ½ cups)
Rice Krispies (Kellogg's®)	125 mL (½ cup)
Rolled oats	60 mL (¼ cup)
Shredded Wheat (Post®)	1 biscuit
Special K (Kellogg's®)	125 mL (½ cup)

Crackers	
Melba toast	4 pieces
Regular soda crackers	7 crackers
Sesame bread sticks (Grissol®)	3 sticks
Wheat (Breton®)	5 crackers
Wheat and grain (Vinta®)	4 crackers
Wheat Thins	12 crackers
Woven wheat (Triscuit®)	5 crackers
Flour, starch, sprouts, meal and bran	
Bran	
• oat	80 mL (⅓ cup)
• Wheat	180 mL (¾ cup)
Corn starch	30 mL (2 Tbsp.)
Flour	
• all-purpose, buckwheat, spelt, whole wheat,	45 mL (3 Tbsp.)
• arrow-root, barley, millet	30 mL (2 Tbsp.)
• oat	60 mL (¼ cup)

Wheat germ	80 mL (⅓ cup)
Wheat or corn meal	30 mL (2 Tbsp.)
Tapioca	30 mL (2 Tbsp.)
Grains and pasta (cooked)	
Amaranth	80 mL (⅓ cup)
Barley	80 mL (⅓ cup)
Buckwheat	80 mL (⅓ cup)
Bulgur	125 mL (½ cup)
Couscous, whole wheat or regular	80 mL (⅓ cup)
Egg noodles	80 mL (⅓ cup)
Konjac noodles	Little or no carbohydrates
Millet	80 mL (⅓ cup)
Pasta, whole wheat or white (macaroni, spaghetti, etc.)	80 mL (⅓ cup)
Quinoa	125 mL (½ cup)
Rice	80 mL (⅓ cup)

Rice vermicelli	80 mL (⅓ cup)
Sorghum	80 mL (⅓ cup)
Teff	80 mL (⅓ cup)
Wild rice	125 mL (½ cup)

Breads and other bakery products

Arepas (corn bread)	1 bread
Bagel, whole wheat or white	⅓ bagel
Bread, whole wheat or white	1 slice
Challah (egg bread)	1 bread
Chapati (Indian flatbread)	1 bread
English muffin, whole wheat or white	½ English muffin
French bread (baguette)	1 piece 5 cm (2 in.) long
Hamburger bun	½ bun
Homemade pie dough	⅛ of a double crust (top and bottom) 23 cm (9 in.) in diameter

Homemade pizza dough	⅛ of a 23 cm (9 in.) diameter crust
Hot dog bun	½ bun
Lebanese or Greek pita bread (gyro), whole wheat or white	½ bread 7 in. (18 cm) in diameter
Naan bread	½ bread 7 in. (18 cm) in diameter
Potato bread	1 slice
Raisin bread	1 slice
Rye bread	1 slice
Salad roll	1 roll
Taco shell	2 shells 13 cm (5 in.) in diameter
Tortilla, wheat or corn	½ tortilla 18 cm (7 in.) in diameter

STARCHY VEGETABLES

*The fibre symbol applies to **all** starchy vegetables, since they are sources of fibre.*

Cassava, cooked	80 mL (⅓ cup)
Chestnuts	
• cookeds	60 mL (¼ cup)
• dried	30 mL (2 Tbsp.)
Corn	
• creamed	80 mL (⅓ cup)
• kernel	125 mL (½ cup)
• on the cob	½ cob 20 to 23 cm (8 to 9 in.) long
Green peas	250 mL (1 cup)
Jerusalem artichoke, raw	125 mL (½ cup)
Lotus, cooked	250 mL (1 cup)
Parsnip, cooked	180 mL (¾ cup)
Plantain, cooked	¼ plantain
Potato, cooked	125 mL (½ cup)

Pumpkin, mashed	375 mL (1½ cups)
Squash, cooked	
• acorn	125 mL (½ cup)
• butternut or Hubbard	250 mL (1 cup)
• spaghetti	500 mL (2 cups)
Sweet potato, cooked	125 mL (½ cup)
Taro, cooked	80 mL (⅓ cup)
Water chestnuts	
• cooked or canned	250 mL (1 cup)
• raw	125 mL (½ cup)
Yam, cooked	125 mL (½ cup)

Fruits

Fruits are high in **vitamins**, **minérals** and **fibre**.

- Preferably eat fresh or frozen fruit. Frozen fruit is as nutritious as fresh fruit.
- Eat the whole fruit with the **peel** to reap the full benefit.
- If you choose canned fruit, rinse it with water to reduce the amount of added sugar.

Fruit juices and fruit drinks contain large amounts of sugar and little fibre. They are classified in the ***Other foods*** group, page 36. To find out more about hydration, see the "Stay hydrated" section on page 55.

The fibre symbol applies to **all** foods in this group, since all fruits with their peel are sources of fibre.

15 g

The **Fruits** food group consists mainly of foods **with carbohydrates**.
Each serving listed contains 15 g of carbohydrates.

Apple	1 small
Apricot, fresh or dried	4
Asian pear	1
Banana	½ large banana or 10 cm (4 in.)
Barbary figs	2 or 375 mL (1½ cups)
Blackberries	500 mL (2 cups)
Blueberries	180 mL (¾ cup)
Cantaloupe	250 mL (1 cup), chunks
Cherries	15
Cinnamon apple (sweetsop)	½
Clementine	2
Coconut, fresh	Little or no carbohydrates
Custard apple (cherimoya)	½ fruit

Cranberries • dried and sweetened • fresh	 30 mL (2 Tbsp.) 500 mL (2 cups)
Dates, fresh or dried	1 large or 3 small
Dragon fruit (pitahaya)	1 small
Figs, fresh or dried	1 large or 2 small
Fruit compote with no added sugar	1 unit or 125 mL (½ cup)
Fruit salad	Varies
Grapes • dried (raisins) • fresh	 30 mL (2 Tbsp.) 15 large
Grapefruit, white, pink or red	1
Ground cherries	25 or 250 mL (1 cup)
Gooseberries	325 mL (1⅓ cups)
Guava	3
Haskap berries	180 mL (¾ cup)
Honeydew melon	250 mL (1 cup), chunks

15 g

Jacque (jackfruit)	125 mL (½ cup)
Japanese medlar	15
Kaki fruit (persimmon)	½ large
Kiwis	2
Kumquat	8
Longan	30
Lychee	10
Mamey fruit (sapote)	¼ fruit or 60 g
Mandarin	
• canned in light syrup	80 mL (⅓ cup)
• fresh	1
Mango	½ medium
Nectarine	1
Orange	1
Papaya	250 mL (1 cup), chunks
Passion fruit (granadilla)	6 or 125 mL (½ cup)

Peach	
• canned in juice	125 mL (½ cup)
• fresh	1
Pear	
• canned in juice	125 mL (½ cup)
• fresh	1
Pineapple	
• canned in juice	125 mL (½ cup), chunks
• fresh	2 slices 2 cm (1 in.) thick
Plums	2
Pomegranate	125 mL (½ cup) of arils
Pomelo	⅓ fruit or 180 mL (¾ cup) in sections
Prunes	3
Rambutan	8
Raspberries	500 mL (2 cups)
Rhubarb	Little or no carbohydrates
Saskatoon berries	250 mL (1 cup)

15 g

Starfruit (carambola)	4
Strawberries	375 mL (1½ cups)
Soursop	125 mL (½ cup) of pulp
Watermelon	325 mL (1⅓ cups), chunks

Vegetables

Vegetables are high in **vitamins**, **minerals** and **fibre**.

- Preferably eat fresh or frozen vegetables. Frozen vegetables are as nutritious as fresh vegetables.
- Eat the whole vegetable **with the peel** to reap the full benefit.
- If you choose canned vegetables, rinse them in water to reduce the amount of salt added for preservation.

Some vegetables, called **starchy vegetables**, are high in carbohydrates.
They are classified in the **Starches** group, page 9.

The fibre symbol applies to all foods in this group, since **all** vegetables with their peel are sources of fibre.

5 g

The **Vegetables** food group consists of foods **with little or no carbohydrates**.
Each serving listed contains 5 g of carbohydrates.
If no serving is indicated, the typical amount eaten contains **less than 5 g** of carbohydrates.

Amaranth (leaves)	
Artichoke	
• fresh	1 whole
• hearts, canned	80 mL (⅓ cup)
Asparagus	
Avocado	
Bamboo shoots	
Beansprouts	250 mL (1 cup)
Beans, yellow or green	250 mL (1 cup)
Beetroot	125 mL (½ cup)
Bell peppers, varied	180 mL (¾ cup)
Bok choy	
Broccoli	
Brussels sprouts	

Cabbage, Chinese (nappa)	
Cabbage, green or red	
Carrot	125 mL (½ cup)
Cauliflower	
Celeriac	125 mL (½ cup)
Celery	
Chayotte	
Cucumber	
Dried seaweed	
Eggplant	
Endive	
Fennel	
Fiddleheads	180 mL (¾ cup)
Green onions	
Kale	250 mL (1 cup)
Kohlrabi	
Leeks	125 mL (½ cup)

5g

Mushrooms • oyster • portobello • white	 8 180 mL (¾ cup)
Okra (gumbo)	
Onions	125 mL (½ cup)
Palm hearts, canned	
Peppers	
Radish	
Radish, white (daikon)	
Rapini	
Rutabaga (turnip, yellow)	125 mL (½ cup)
Salad (arugula, lettuce, mache, scarole, watercress, etc.)	
Shallots (French)	45 mL (3 Tbsp.)
Snowpeas	
Spinach	
Sprouts, Alfalfa or radish	

Swiss chard	
Tomato	1 regular, 10 cherry or 250 mL (1 cup)
White turnip (rabiole)	180 mL (¾ cup)
Zucchini	

15 g

Protein foods

Protein foods are high in **protein**, **vitamins** and **minerals**.

Tips

- Eat plant-based protein foods, such as nuts, seeds, legumes, tofu and other soy derivatives, more often.
- Incorporate sustainably harvested fish high in heart-healthy fats into your diet.
- If you eat animal-based protein foods, choose ones that are lower in saturated fat, such as milk and yogurt with 2% milk fat or less, cheese with 20% milk fat or less and lean meat cuts.

The **Protein foods** group consists of foods **with carbohydrates** and foods **with little or no carbohydrates.**

Protein foods with carbohydrates

Each serving listed contains 15 g of carbohydrates.

ANIMAL BASED

Dairy products

Kefir 3.25% M.F., 2% M.F. or 1% M.F.	Varies
Milk, cow's	
• 3.25% M.F., 2% M.F., 1% M.F. or skim	250 mL (1 cup)
• powder, whole or skim	60 mL (¼ cup)
Milk, evaporated, canned	125 mL (½ cup)
Milk, goat's	325 mL (1⅓ cups)
Milk, sheep's	250 mL (1 cup)
Yogurt, flavoured, regular or Greek, less than 4% M.F. or 4% M.F. or higher	125 mL (½ cup) or 100 g
Yogurt, goat	Varies

15 g

PLANT BASED

Soy derivatives	
Soybeans, roasted, plain	80 mL (⅓ cup)
Soy beverage, regular or flavoured *Other plant-based beverages are low in protein and are classified in the **Other foods** group, page 36.*	Varies
Soy yogurt substitutes *Other plant-based yogurt substitutes are low in protein and are classified in the **Other foods** group, page 36.*	125 mL (½ cup)
Legumes	
Fava beans, lupin beans, cooked	325 mL (1½ cups)
Legumes, cooked (black beans, chickpeas, kidney beans, lima beans, pinto beans, white beans)	125 mL (½ cup)
Other	
Seitan	Varies

Protein foods with little or no carbohydrates

Each serving listed contains 5 g of carbohydrates. If no serving is indicated, the typical amount eaten contains **less than 5 g** of carbohydrates.

ANIMAL BASED

Organ meats

Blood pudding	
Brain • beef, lamb, pork or veal	
Heart • beef, caribou, lamb, pork, turkey or veal	
Liver • lamb, turkey or chicken • beef, pork or veal	 100 g
Tongue • beef, pork or veal	

Fish, seafood and shellfish

Cod, dried	

Fish (bluefin tuna, cod, haddock, herring, mackerel, salmon, sole, tilapia, trout, walleye)	
Fish, canned (salmon, sardines, tuna in oil or water)	
Salmon, smoked	
Seafood • clams, octopus, snails or squid • mussels, cooked • oysters • scallops, cooked	 8 medium 5 medium 10 large
Shellfish (lobster, shrimp, snow crab)	

Dairy products

Cheese (Blue, Brie, Camembert, Cheddar, Goat, Gouda, Gruyère, Havarti, Marbled, Monterey, Mozzarella, Parmesan, Swiss)	
Fresh cheese • bocconcini, feta, mozzarella • cottage, 4% M.F., 2% M.F. or 1% M.F. • ricotta, regular or low fat	 80 mL 80 mL

Halloumi	
Labneh	125 mL (½ cup)
Regular or plain Greek yogurt, less than 4% M.F. or with 4% M.F. or higher	Varies
Processed cheese, sliced	2 slices

Meat, poultry and eggs

*Deli meats are very high in fat and salt. They are classified in the **Other** foods group, page 36.*

Beef, lean cuts, fatty cuts or minced	
Chicken or quail egg	
Chicken, with skin or skinless	
Game (bear, beaver, bison, duck, caribou, deer, elk, emu, goat, goose, guinea fowl, moose, ostrich, rabbit, wild boar)	
Horse	
Lamb	
Pork, lean cuts, fatty cuts or minced	
Turkey, with skin or skinless	
Veal	

5 g

PLANT BASED

Soy derivatives	
Green soybeans (edamame)	
Soy beverage, unsweetened *Other plant-based beverages are low in protein and are classified in the **Other foods** group, page 36.*	
Tempeh	
Textured vegetable protein (TVP)	
Tofu	
Tofu spread	
Legumes	
Hummus	60 mL (¼ cup)
Nuts and seeds	
Almond flour (almond powder)	60 mL (¼ cup)
Nut butter (almond, cashew, hazelnut, peanut, pistachio, sesame or tahini, soy, sunflower)	30 mL (2 Tbsp.)

Nuts	
• almonds, peanuts, pili	80 mL (⅓ cup)
• Brazil nuts, walnuts, macadamia nuts, hazelnuts or pecans	
• cashew nuts	30 mL (2 Tbsp.)
• pistachios	60 mL (¼ cup)
Seeds (chia, flax, hemp, pine nuts, pumpkin, sesame, squash, sunflower)	
Other	
Plant-based pâté	50 g
Plant-based protein patties (alternative to meat patties)	
Plant-based sausage	1 sausage

15 g

Other foods

This section contains **other foods** commonly found in stores.
Most are **highly processed** foods.

Highly processed foods have a long and complicated list of ingredients.
They are often high in saturated fat, sugar and salt, in addition to containing food additives.
If you eat them, do so in moderation.

Some desserts are classified in the **Mixed dishes** section, page 48.

The ***Other foods*** group consists of foods **with carbohydrates** and foods **with little or no carbohydrates.**

Other foods with carbohydrates

Each serving listed contains 15 g of carbohydrates.

Food	
Breakfast cereals	
• Corn squares (Quaker®), Harvest Crunch, original (Quaker®), Muslix (Kellogg's®), Oatmeal Crisp (General Mills®), Oatmeal squares (Quaker®) or Shreddies (Post®)	80 mL (⅓ cup)
• Frosted Flakes (Kellogg's®), Honey Cheerios (General Mills®), Original Kashi® or Raisin Bran (Kellogg's®)	125 mL (½ cup)
• Mini-Wheats (Kellogg's®)	8 biscuits
Chips	
• corn, restaurant style	6
• various flavours	15
Chocolate	
• milk or white	25 g
• dark (70% cacao)	45 g
Chocolate croissant	½

Cookies	
• chocolate chip, chocolate-covered, oatmeal or sandwich	2
• molasses, maple leaf	1
• tea or dry	4
Croissant	½
Doughnut	½ doughnut or 30 g
Flavoured ice (e.g., Popsicle®)	1 unit or 60 mL (¼ cup)
Fries	10 regular
Frozen waffle	1
Gelatin, flavoured (e.g., Jell-O®)	125 mL (½ cup)
Hard candy	3 to 4 candies or 15 g
Ice cream	Varies
Ice cream bar	Varies
Ice cream cone, sugar or waffle	1 unit or 20 g
Ice milk	125 mL (½ cup)
Ice milk bar, fudge	1 unit or 60 mL (¼ cup)
Instant oatmeal, flavoured	½ packet

Jujubes	Varies
Marshmallows	
• giant	1
• mini	35 marshmallows or 20 g
• regular	3
Pudding	
• milk	60 mL (¼ cup)
• rice or tapioca	80 mL (⅓ cup)
• soy	1 unit or 125 g
Sherbet	80 mL (⅓ cup)
Soft caramels	3 caramels or 20 g
Tofu dessert	1 unit or 150 g
Yogurt, frozen	Varies
Yogurt, drinkable	Varies
Yogurt substitute, almond, coconut milk or oat	Varies
Condiments and spreads	
Fruit jelly, regular	15 mL (1 Tbsp.)

Honey	15 mL (1 Tbsp.)
Jam, regular *For light jam-type spread, see fruit spread, page 46.*	15 mL (1 Tbsp.)
Ketchup	60 mL (¼ cup)
Maple taffy	15 mL (1 Tbsp.)
Marmalade, regular	15 mL (1 Tbsp.)
Molasses	15 mL (1 Tbsp.)
Sauce	
• barbecue, hoisin, peanut, steak or teriyaki	Varies
• cherry, cranberry, sweet and sour, sweet soy (sushi)	30 mL (2 Tbsp.)
• chili or cocktail	60 mL (¼ cup)
Spread	
• caramel or maple butter	15 mL (1 Tbsp.)
• chocolate and hazelnut	20 mL (4 tsp.)
Sugar	
• brown, cane, maple or white	4 sachets or 15 mL (1 Tbsp.)
• icing	30 mL (2 Tbsp.)

Sweet pickles	Varies
Syrup (corn, table, maple)	15 mL (1 Tbsp.)
Beverage	
Beverage, cocktail or fruit punch	125 mL (½ cup)
Chocolate milk 3.25% M.F  , 2% M.F. or 1% M.F.	125 mL (½ cup)
Coconut water, readymade	325 mL (1⅓ cups)
Energy drink (e.g., Redbull®)	125 mL (½ cup)
Kombucha	Varies
Hot chocolate powder	Varies
Iced tea • powder • readymade	 15 mL (1 Tbsp.) 180 mL (¾ cup)
Juice, clam and tomato 	325 mL (1⅓ cups)
Juice or nectar: • fruit • prune or grape	 125 mL (½ cup) 80 mL (⅓ cup)
Juice, vegetable or tomato, low salt or regular 	375 mL (1½ cups)

Lemonade	125 mL (½ cup)
Plant-based beverage, regular or flavoured (almond, cashew nut, coconut, oat or rice)	Varies
Smoothie	Varies
Soft drink, regular	
• ginger, tonic soda	180 mL (¾ cup)
• various flavours	125 mL (½ cup)
Sports drink (e.g., Gatorade®)	250 mL (1 cup)

Other foods with little or no carbohydrates

Each serving listed contains 5g of carbohydrates.
If no serving is indicated, the typical amount eaten contains **less than 5 g** of carbohydrates.

Food	
Bacon, pork or turkey	
Chewing gum, regular	2 pieces
Cream 10% M.F., 15% M.F., 18% M.F., 20% M.F., 32% M.F., 35% M.F. or whipped	
Cream cheese, regular, light or fat free	60 mL (¼ cup)
Cocoa powder	
Cold meats (bologna, capicollo, ham, mock chicken, mortadella, pepperoni, turkey or chicken breast, salami)	
Cretons	
Dried coconut	
• sweetened	30 mL (2 Tbsp.)
• unsweetened	60 mL (¼ cup)
Dried sausage	

Duck fat	
Gelatin, plain	
Ice cream cone, unsweetened	1 unit or 20 g
Konjac noodles	
Liver pâté	
Montreal smoked meat	1 pouch or 175 g
Processed cheese spread	30 mL (2 Tbsp.)
Prosciutto	
Sausages • beef, pork or smoked (hot dog) • Italian, Mergez, Polish or Toulouse	2 sausages or 100 g
Shoulder ham (picnic)	
Sour cream 1% M.F. (fat free), 5% M.F. (light), 14% M.F. or 18% M.F.	
Table syrup with no added sugar (e.g., ED Smith®)	30 mL (2 Tbsp.)
Whipped topping (ex.: Cool Whip®)	80 mL (⅓ cup)
Seasonings, condiments and spreads	
Balsamic vinegar coulis	15 mL (1 Tbsp.)

Butter	
Capers	
Chilli, fresh or powder	
Coconut milk, regular or light	
Dairy blend for cooking or coffee, 5% M.F.	
Dill pickles	
Extract of almond, banana, caramel, vanilla, etc.	
Garlic, fresh or powdered	
Ginger, fresh or powdered	
Horseradish	
Lard or vegetable fat	
Lemon (juice or zest)	
Light jam fruit spread	15 mL (1 Tbsp.)
Lime (juice or zest)	
Margarine	
Mayonnaise or mayonnaise-style sauce	
Miso	

Mustard, dry or prepared	
Non-stick spray	
Olives, green or black	
Oils (almond, avocado, camelina, canola, corn, flax, grape seed, hazelnut, nut, olive, peanut, safflower, sesame, soy, sunflower)	
Onion powder	
Pepper	
Regular store-bought dressing • blue cheese, Caesar, Greek, Italian or ranch • coleslaw, French or Thousand Island	 30 mL (2 Tbsp.)
Relish	15 mL (1 Tbsp.)
Salt (celery, garlic, onion, sea, table)	
Sauces (brown, chili, fish, hollandaise, meat, salsa, soy, sriracha, piri-piri, tartar or Worcestershire)	
Shortening	
Tropical oils (coconut, palm, palm kernel)	
Various herbs, fresh and dried (may contain salt)	
Various spices (may contain salt)	

Vinegar	
Wasabi	
Beverages	
Broth • beef or chicken, regular, low salt or salt free • vegetable, regular, low salt or salt free	310 mL (1¼ cups)
Coffee creamer, powder or liquid	
Coffee, plain	
Consommé	
Unsweetened plant-based beverages (almond, cashew, coconut)	
Sparkling mineral water	
Tea and herbal tea, plain	
Water flavouring	

Mixed dishes

This section contains the most common homemade or store-bought mixed dishes that contain carbohydrates.

For each dish, the amount of carbohydrates is indicated for a reference serving. You may eat more or less than this. You will have to adjust the amount of carbohydrates accordingly.

Considering the variety of recipes and store-bought dishes, the amounts of carbohydrates are averages and may not reflect what you eat.

The nutritional values of the homemade versions of the mixed dishes were calculated using minimally processed ingredients with little or no added salt.

FOODS	Serving	Amount of carbohydrates
Homemade or store-bought		
Beef and cheese enchilada	1 unit or 192 g	25 g
Beef chilli, vegetarian chilli, lentil stew, lentil and vegetable stew	250 mL (1 cup)	25 g
Black bean and meat stew (e.g., feijoada)	250 mL (1 cup) or 225 g	15 g
Chicken empanada	1 unit or 58 g	20 g
Chicken pie 20 cm (8 in.) in diameter	⅙ to ⅓ of pie or 180 g	35 g
Chinese ravioli (dumplings) with meat, poultry or seafood	6 ravioli or 220 g	20 g
Lentil or red kidney bean crepes (dosa, pesarattu)	2 pancakes 23 cm (9 in.) in diameter	20 g
Macaroni and cheese (Kraft)	250 mL (1 cup)	55 g
Meat lasagna, vegetable lasagna	10 cm x 10 cm (4 in.) piece or 250 g	35 g
Meat pie 20 cm (8 in.) in diameter	⅙ to ⅓ of pie or 180 g	25 g
Meat, vegetable and starchy vegetable stew	250 mL (1 cup)	15-30 g
Pasta casserole (spaghetti with meat sauce, homemade macaroni and cheese, Chinese macaroni, meat and tomato macaroni, etc.)	250 mL (1 cup)	40-45 g

Quiche lorraine 20 cm (8 in.) in diameter	⅓ of quiche or 180 g	35 g
Rice and beans	250 mL (1 cup)	45 g
Salmon pie 20 cm (8 in.) in diameter	⅙ to ⅓ of pie or 180 g	40 g
Shepherd's pie, meat or vegetarian	7 cm (3 in.) x 10 cm (4 in.) piece or 250 g	30 g
Homemade or store-bought salads		
Couscous salad, salad and bean salad	125 mL (½ cup)	20 g
Pasta and vegetable salads	125 mL (½ cup)	15 g
Vegetable and legume salad	125 mL (½ cup)	10 g
Homemade or store-bought soups		
Chicken noodle soup	250 mL (1 cup)	10 g
Cream of mushroom, cream of tomato	250 mL (1 cup)	15 g
Cream of squash	250 mL (1 cup)	20 g
Cream of vegetable	250 mL (1 cup)	10 g
Lentil soup, spea soup	250 mL (1 cup)	20 g
Minestrone soup	250 mL (1 cup)	20 g
Vegetable and pasta soup, beef and vegetable soup	250 mL (1 cup)	15 g

Vegetable soup	250 mL (1 cup)	5 g
Breakfast		
Baked beans, maple syrup beans	125 mL (½ cup)	25 g
French toast with milk 2% M.F. and margarine	1 slice	15 g
Thin crepe	18 cm (7 in.) in diameter or 60 mL of crepe mix	15 g
Dessert		
Blueberry muffin • homemade • store-bought	 1 muffin (100 g) 1 muffin (100 g)	 30 g 50 g
Chocolate muffin, chocolate chip muffin • homemade • store-bought	 1 muffin (100 g) 1 muffin (100 g)	 35 g 50 g
Fruit pie 23 cm (9 in.) in diameter	⅛ to ⅙ of pie or 100 g	40 g
Homemade or store-bought raisin bran muffin	1 muffin (100 g)	40 g
Homemade cake with icing	Varies	Varies
Lemon meringue pie 23 cm (9 in.) in diameter	⅛ to ⅙ of pie or 100 g	50 g

Sugar pie 23 cm (9 in.) in diameter	⅛ to ⅙ of pie or 100 g	50 g
Sweet rice	125 mL (½ cup)	40 g
Pecan pie 23 cm (9 in.) in diameter	⅛ to ⅙ of pie or 100 g	55 g

Examples of carbohydrate counting

Example 1: Teriyaki salmon with barley and grilled vegetables

FOOD	Guide food group	Amount of carbohydrates
Salmon	Protein food with little or no carbohydrates	0 g
30 mL (2 Tbsp.) store-bought teriyaki sauce	Other food with varying amount of carbohydrates. See the Nutrition Facts table opposite	15 g
75 mL (⅓ cup) cooked barley	Starch	15 g
125 mL (½ cup) of cooked, diced sweet potato	Starchy vegetable	15 g
Cooked broccoli	Vegetable	0 g
Cooking oil, spices and herbs	Other food with little or no carbohydrates	0 g
	Total	**45 g**

= Foods that contain carbohydrates

The amounts shown in these meals are for reference only and are not necessarily the amount you need.

Nutrition Facts

for 2 Tbsp. (30 mL)

Calories 60	Value % Daily*
Fat 0 g	0%
Saturated 0 g + Trans 0 g	0%
Carbohydrate 15 g	
Fibre 0 g	0%
Sugars 12 g	12%
Protein 0.5 g	
Cholesterol 0 mg	
Sodium 590 mg	25%
Potassium 75 mg	2%
Calcium 0 mg	0%
Iron 0 mg	0%

*5% or less is a little, 15% or more is a lot

Example 2: Yogurt topped with raspberries and almonds

FOOD	Guide food group	Amount of carbohydrates
125 mL (½ cup) of vanilla yogurt 2% M.F. or less	Protein food with carbohydrates	15 g
Almonds	Protein food with little or no carbohydrates	0 g
125 mL (½ cup) of raspberries	Fruit	5 g
	Total	20 g

Detail of the calculation for the raspberries:

In the **Fruits** food group, p. 19, the serving of raspberries that provides 15 g of carbohydrates is 375 mL (1½ cups). How many carbohydrates are there in 125 mL (½ cup) of raspberries?

Calculation:

125 x 15 ÷ 375 = 5 g of cabohydrates
125 mL of raspberriess = 5 g of carbohydrates

Amount of food	Amount of carbohydrates
375 mL of raspberries ÷	x **15** g of carbohydrates
125 mL of raspberries	= **??** g of carbohydrates

Stay hydrated

Water is the ideal drink to stay hydrated.

Sparkling water, homemade flavoured waters, herbal teas, unsweetened tea and coffee are also good choices.

Juices

Juices contain vitamins and minerals, but **little or no fibre**. In addition, fruit juices, even ones that are 100% pure with no added sugar, are very high in **sugar**. As for vegetable juices, they are very high in **salt**.

If you drink juice:

- Choose 100% pure fruit juice and low-salt vegetable juice.
- Drink small amounts (for example, 125 mL, or ½ cup) and do so during the meal, to reduce its effect on your blood sugar.

Other beverages

Soft drinks, fruit drinks, flavoured coffee or tea and hot chocolate contain large amounts of added sugar, little or no vitamins and minerals and no fibre. If you drink them, do so in moderation.

Alcohol

Drinking alcohol can:

- Increase blood sugar if the drink contains a lot of carbohydrates;
- Lower blood sugar and **lead to hypoglycemia**, i.e., cause blood sugar to drop below target values, especially if you drink alcohol on an empty stomach.

People who are treated with insulin or insulin secretagogues* are **at higher risk** of hypoglycemia.

Here are some tips if you drink alcohol:

- Always have something to eat when drinking.
- Alternate with unsweetened, non-alcoholic beverages.
- Drink small amounts at a time and reduce the frequency of your drinking.
- Check with your doctor if alcohol is contraindicated in your situation.

If you are at risk of hypoglycemia, take the following precautions too:

- Test your blood sugar levels more often in the next 24 hours. Don't forget to do it before going to bed.
- Have a snack that contains carbohydrates and protein before going to bed, as needed.
- Keep a supply of fast-absorbing sugar within reach.
- Wear medical identification and tell family and friends that you have diabetes.

** Insulin secretagogues: gliclazide (Diamicron© and Diamicron MR©), glimepiride (Amaryl©), glyburide (Diabeta©), repaglinide (GlucoNorm©).*

Average carbohydrate content of some alcoholic beverages

The quantity for each beverage corresponds to a standard alcoholic drink.

Alcoholic beverage	Quantity	Carbohydrates
Beer (5% alcohol)	1 bottle (341 mL)	12 g
Cherry brandy	45 mL (1.5 oz)	15 g
Cider (6% alcohol)	280 mL (10 oz)	17 g
Dry white, red or rosé wine (12% alcohol)	140 mL (5 oz)	2 g
Fortified wine (port, sherry, etc.)	85 mL (3 oz)	10 g
Light beer (4% alcohol)	1 bottle (341 mL)	5 g
Liqueur (coffee liqueur, mint cream, etc.)	45 mL (1.5 oz)	20 g
Non-alcoholic beer (0.5% alcohol)	1 bottle (341 mL)	10-20 g
Sparkling wine, champagne	140 mL (5 oz)	2 g
Spirits (cognac, gin, rum, vodka, whiskey, etc.)	45 mL (1.5 oz)	0 g

If you are at risk of hypoglycemia, you usually **do not need** to take the carbohydrates in alcoholic beverages into account. Discuss it with your dietitian-nutritionist or health care team.

Sugar substitutes

Although sugar substitutes, also known as sweeteners, may seem like a good idea to reduce the amount of sugar in your diet, they are not essential or a solution for managing blood sugar levels.

Sugar substitutes are found in many highly processed foods. They maintain the taste for sweet foods. Some studies suggest that they may have adverse health effects, such as disrupting the gut flora. For these reasons, **it's best to have only small amounts occasionally and instead get used to eating foods that are not as sweet**.

Many store-bought foods contain sugar substitutes and provide little or no carbohydrates.
So they have not been listed in the guide.

Two categories of sugar substitutes are approved in Canada:

- Non-caloric sugar substitutes, such as aspartame, sucralose and cyclamates. They do not contain any calories and **do not increase blood sugar**;
- Caloric sugar substitutes, also called sugar alcohols or polyols, such as sorbitol or xylitol. These substitutes **may increase your blood sugar slightly**. You can assess the effect by testing your blood sugar more often when you use them. If used in excessive amounts, i.e., more than 10 g per day, sugar alcohols can cause intestinal discomfort such as flatulence and diarrhea.

Your carbohydrate needs

Most adults need 45 to 75 grams (g) of carbohydrates per meal and 15 to 30 g of carbohydrates per snack, if necessary. Your dietitian-nutritionist can help you determine your needs.

Your meals:

_____ g of carbohydrates at breakfast

_____ g of carbohydrates at lunch

_____ g of carbohydrates at dinner

Your snacks, if necessary:

_____ g of carbohydrates for the morning snack

_____ g of carbohydrates for the afternoon snack

_____ g of carbohydrates for the evening snack

Your foods

You can use this section to write down the amount of carbohydrates in the foods and mixed dishes that you eat regularly and which are not listed in the guide.

Name of the food	Serving	Amount of carbohydrates

For health professionals

An appendix for health professionals explains the criteria that were used to determine the serving sizes and symbols. It is available for consultation or download on the MSSS Publications website, on the ***Carbohydrate counting guide for people living with diabetes*** page.

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