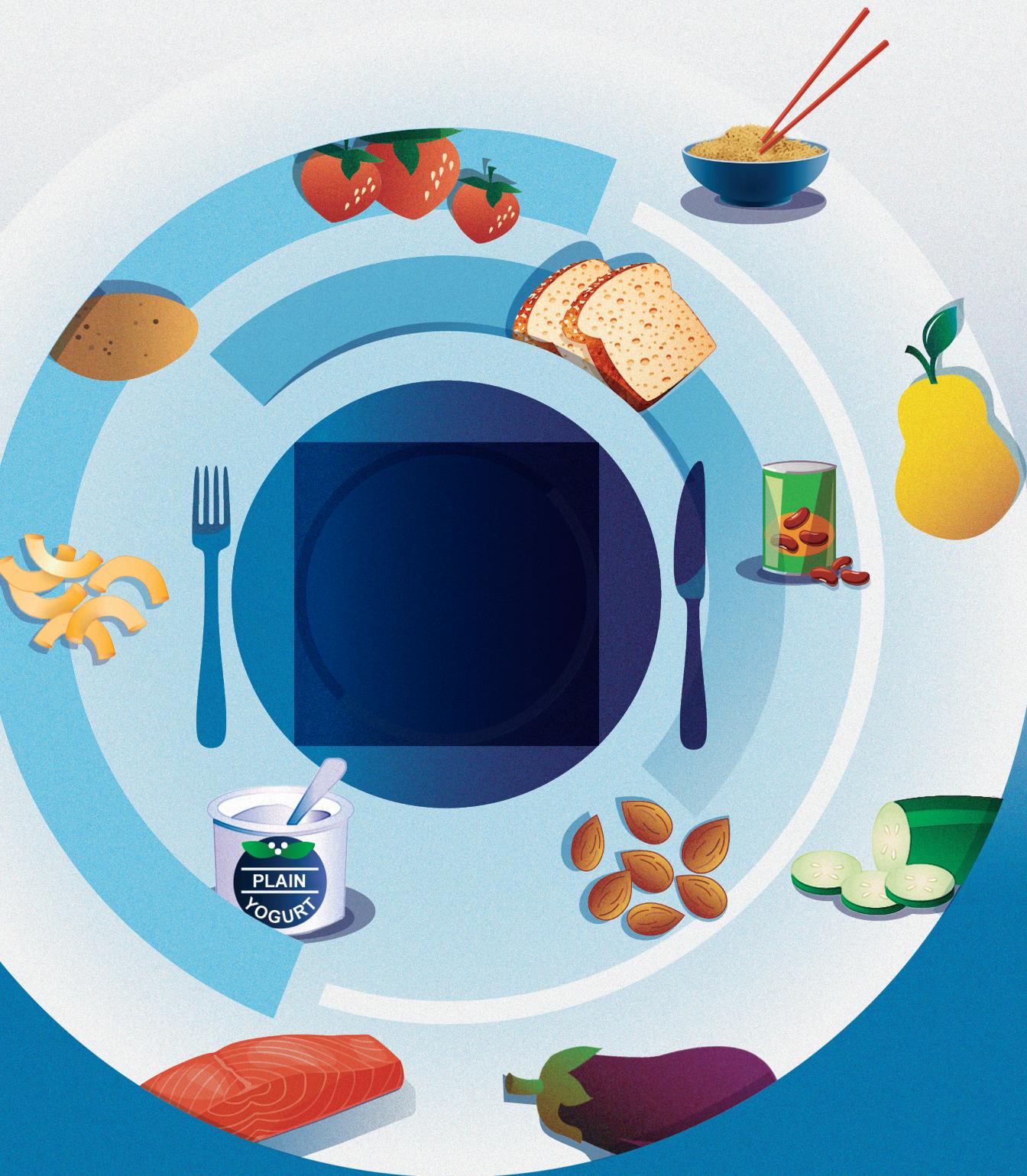


# A closer look: Diet for people living with diabetes



The goal of this guide is to help people living with diabetes choose a healthy and balanced diet. What you eat is key to treating diabetes by achieving and maintaining target blood glucose levels, or the sugar levels in the blood. Maintaining blood glucose at target levels reduces your risk of developing complications affecting the eyes, kidneys, nerves, blood vessels, and heart.

## Target blood sugar values

Your blood sugar level should generally be:

- ▶ Between **4 and 7 mmol/L** with an empty stomach or before a meal;
- ▶ Between **5 and 10 mmol/L** two hours after starting a meal.

## What are carbohydrates (carbs)?

When you have diabetes, your body has trouble using the energy circulating in the form of sugar in your blood. This is why your blood sugar level may rise above normal values.

Sugar circulating in the blood comes mainly from the carbohydrates that you eat. Carbohydrates in food come in different forms:

- ▶ **Sugars:** They give food a sweet taste. They may be naturally present, like in fruit and milk, or added, like in desserts, sweetened drinks, and some processed foods. **Sugars increase blood sugar level.**
- ▶ **Starch:** It doesn't give food a sweet taste. Starch is found in grains, legumes, and starchy vegetables. **Starch increases blood sugar level.**
- ▶ **Fiber:** It is found in whole-grain cereal products, fruits, vegetables, legumes, nuts, and seeds. Fiber is not digested, **so it does not increase blood sugar.** On the contrary, it **helps limit the increase in blood sugar levels after meals.** **High-fiber foods** are preferred.

If you live with diabetes, it doesn't mean you should eliminate all carbohydrates from your diet. Carbohydrates are your body's main source of energy. **Instead, you should pay close attention to the amount and quality of carbohydrates you eat. Make sure to spread them evenly throughout the day.**

## Meals and snacks

- ▶ Eat three balanced meals a day at regular times.
- ▶ Avoid skipping meals.

Snacks can be added **as needed.** A nutritious snack is a food containing **carbohydrates** and a **protein.**

## Variety is key

Eat a **variety of food and cook with fresh, minimally processed basic ingredients** as often as possible. All kind of food can be eaten, even if you're living with diabetes. Your overall diet is what matters for good health.

## What about sugar substitutes?

Sugar substitutes such as aspartame, stevia, sucralose, and maltitol offer no benefits. If you choose to eat them, it's best to do so in small quantity and only occasionally. Sugar-free foods and diet drinks often contain sugar substitutes.

## What about alcohol?

Alcoholic beverages can cause blood sugar to fluctuate. If you drink alcohol, it is recommended to do so while eating, to stick to a **maximum of 2 drinks per day for women and 3 drinks per day for men**, and to not drink every day. Check with your doctor to see if alcohol is contraindicated in your situation.

## Tips for a healthy heart



### Fats

Some fats, called monounsaturated and polyunsaturated fats, are to be favoured, because they are beneficial to heart health.

Here are some examples of foods that contain them:

- ▶ Nuts and seeds;
- ▶ Fatty fish, such as salmon, trout, sardines, mackerel, and herring;
- ▶ Avocado;
- ▶ Vegetable oils, such as olive and canola;
- ▶ Soft margarine made from canola, olive, sunflower, or safflower oil.

On the other hand, reducing your saturated fat consumption is recommended.

- ▶ Add meat substitutes more often to your menu, like legumes, tofu, and fish.
- ▶ Remove skin from chicken and turkey before eating.
- ▶ Select unprocessed, lean cuts of meat and remove any visible fat.
- ▶ Choose milk and yogurt with 2% or less fat, and cheese with 20% or less fat.



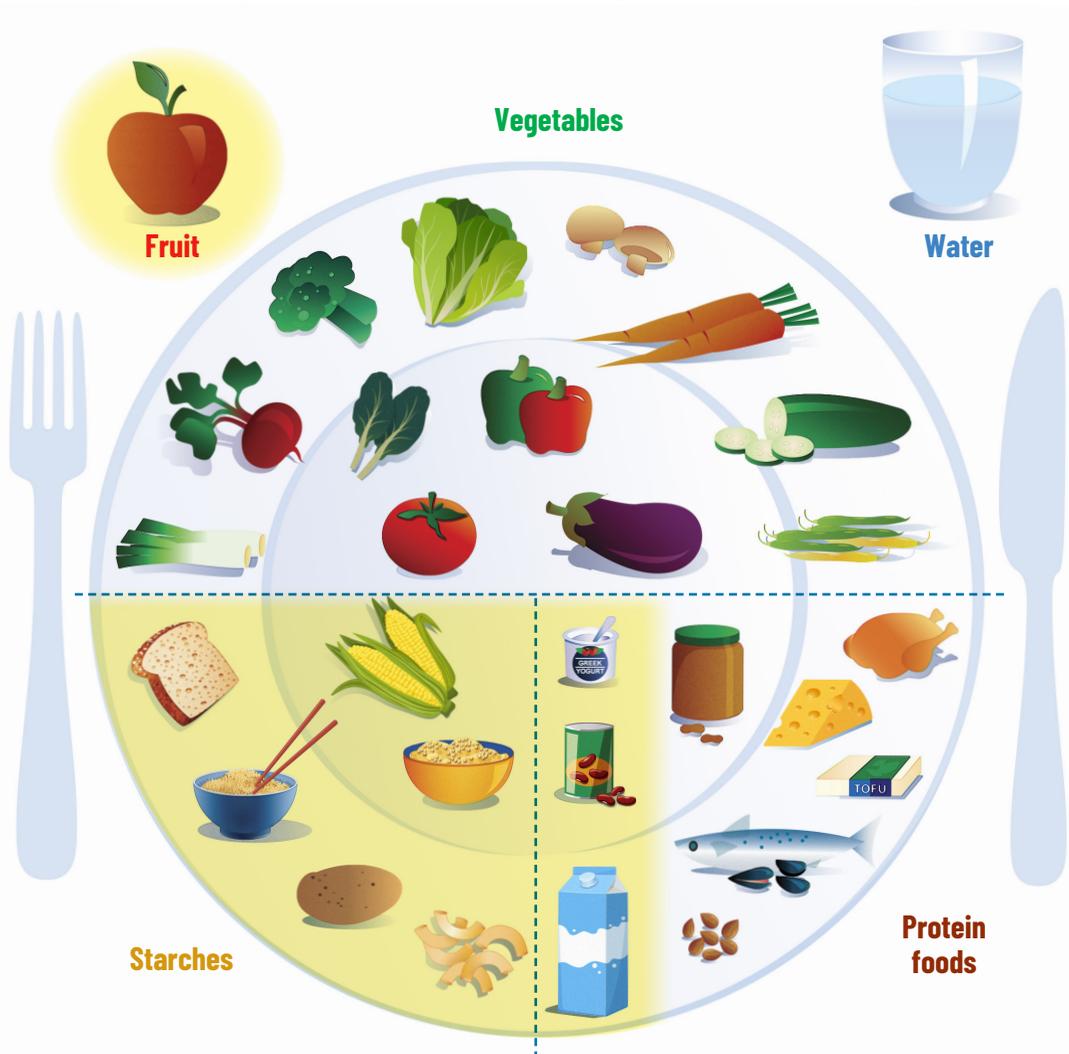
### Salt

A low-sodium diet helps lower blood pressure and the risk of developing heart disease. Here are a few tips:

- ▶ Cook with minimally processed foods as often as possible.
- ▶ At the grocery store, compare nutrition facts tables and choose products that contain less sodium.
- ▶ Season your dishes with spices, herbs, onion, garlic, or lemon.

## Let the balanced plate inspire your meals

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



## Be mindful of your hunger cues and sense of fullness

**Hunger indicates** the physical need for food. It is accompanied by a feeling of hollowness in the stomach, gurgling, and decreased energy or focus. Before you eat a meal, you should feel moderate hunger, without feeling famished.

**Fullness** is the feeling when your hunger disappears and you have eaten enough. Signs of fullness are: food becomes less tasty, your chewing slows, and you feel a sense of comfort and well-being. At the end of a meal, you want to feel satisfied without feeling full.

Here are some tips for staying mindful of your signals of fullness:

- ▶ Avoid distractions when eating: TV, cellphone, work, etc.
- ▶ Eat slowly and take time to chew each bite.
- ▶ Use all your senses to fully appreciate the aroma, texture, colours, and flavours of the food you are eating.
- ▶ Never feel obligated to empty your plate.

## Meal examples

### Breakfast



125 mL (1/2 cup) Greek yogurt, flavoured, with 2% or less fat:

**1 protein food with carbs = 15 g of carbs**

1/2 banana: **1 fruit = 15 g of carbs**

2 whole wheat toast: **2 starches = 30 g of carbs**

Natural peanut butter: **protein food with little or no carbs**

Glass of water

Cup of black coffee

**TOTAL = 60 g of carbs**

### Lunch



150 ml (2/3 cup) whole wheat couscous:

**2 starches = 30 g of carbs**

125 ml (1/2 cup) chickpeas:

**1 protein food with carbs = 15 g of carbs**

Almonds: **protein food with little or no carbs**

Cucumber, red pepper, broccoli, and herbs: **vegetables**

Olive oil and lemon juice

1 medium pear: **1 fruit = 15 g of carbs**

Glass of water

**TOTAL = 60 g of carbs**

### Dinner



150 ml (2/3 cup) whole wheat spaghetti: **2 starches = 30 g of carbs**

Tomato sauce with meatballs: **protein food with little or no carbs**

Garden salad: **vegetables**

Homemade salad dressing

250 ml (1 cup) milk with 2% or less fat: **1 protein food with carbs = 15 g of carbs**

250 ml (1 cup) berries: **1 fruit = 15 g of carbs**

Glass of water

**TOTAL = 60 g of carbs**

 = Carbohydrate foods

*The quantities listed in these meals are for reference only and do not necessarily correspond to the quantity you need.*

## Simplified Carbohydrate Counting\*

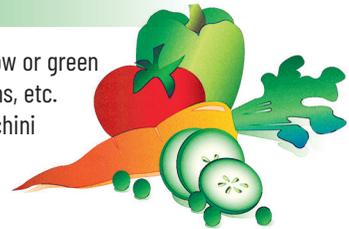
Most people need **45–75 grams (g) of carbohydrates per meal** and **15–30 g of carbohydrates per snack**, if required. Your dietitian will help you determine your needs.

**Your needs:** \_\_\_\_\_ g of carbohydrates per meal, \_\_\_\_\_ g of carbohydrates per snack.

### VEGETABLES

#### Low or no carbs

- Asparagus
- Beets
- Broccoli
- Cabbage
- Carrots
- Cauliflower
- Celery
- Cucumber
- Leek
- Mushrooms
- Okra
- Onion
- Pepper
- Radish
- Spinach, arugula, lettuce
- Tomato
- Turnip
- Yellow or green beans, etc.
- Zucchini



▶ Eat plenty of vegetables. Vegetables can be eaten in any form. Frozen vegetables are as nutritious as fresh vegetables.

### FRUIT

#### 1 serving of fruit = 15 g of carbs

- 500 ml (2 cups) whole strawberries
- 375 ml (1-1/2 cups) raspberries
- 250 ml (1 cup) blackberries
- 180 ml (3/4 cup) blueberries
- 250 ml (1 cup) cantaloupe or honeydew melon
- 1 medium fruit: orange, peach, apple, pear
- 1/2 banana or 1/2 grapefruit
- 2 clementines, plums, or small kiwis
- 15 cherries or large grapes
- 125 ml (1/2 cup) unsweetened fruit salad or fruit compote
- 30 ml (2 tablespoons) dried raisins or dried cranberries
- 3 small dried dates or 3 dried prunes



▶ Frozen fruit is as nutritious as fresh fruit. Give preference to whole fruit with the peel.

### STARCHES

#### 1 serving of starch = 15 g of carbs

##### Grains

- 1 slice of bread
- 75 ml (1/3 cup) cooked pasta, or cooked rice, barley, couscous, or millet
- 125 ml (1/2 cup) cooked quinoa or bulgur
- 4 Melba toasts
- 1/2 pita bread or 1/2 hamburger bun
- 1/3 Naan bread
- 125 ml (1/2 cup) unsweetened breakfast cereal
- 60 ml (1/4 cup) rolled oats

##### Starchy vegetables

- 1/2 medium potato or 125 ml (1/2 cup) mashed potatoes
- 60 ml (1/4 cup) mashed sweet potatoes
- 125 ml (1/2 cup) kernel corn, buttercup squash, or yam
- 250 ml (1 cup) green peas
- 500 ml (2 cups) spaghetti squash
- 75 ml (1/3 cup) or 1/4 plantain
- 60 ml (1/4 cup) raw cassava



▶ When selecting grain products, give preference to whole grain products.

\* Serving sizes represent the approximate amount of carbohydrates that will raise blood sugar (fiber has been removed).

## PROTEIN FOODS

### WITH CARBOHYDRATES

1 serving of protein food with carbs = 15 g of carbs

#### Plant source

- 125 ml (1/2 cup) cooked legumes: red beans, lentils, chickpeas, etc.

#### Milk and dairy products

- 250 ml (1 cup) milk with 2% or less fat
- 125 ml (1/2 cup) or one 100 g container of Greek or regular flavoured yogurt with 2% or less fat



### CARB-FREE

### Low or no carbs

#### Plant source

- Tofu and tempeh
- Unsalted nuts and seeds
- Natural peanut or nut butter
- Enriched, unsweetened soy beverage
- Textured vegetable protein (TVP)
- Edamame

#### Animal source

- Poultry, fish, seafood, and lean meats
- Eggs
- Cheese with 20% or less fat
- Cottage cheese, ricotta, and labneh
- Greek or regular plain yogurt with 2% or less fat\*



► Eat plant-based proteins and fish more often.

\* Since the carbohydrate content of plain yogurt varies by brand, it is best to check the nutrition facts table on the package.

## ADDED SUGARS

1 serving of added sugars = 5 g of carbs

- 5 ml (1 teaspoon) of sugar, brown sugar, honey, maple syrup, etc.

► Use in small quantity.



When you don't have measuring cups and spoons, you can use your hands to estimate your portion size



The tip of a thumb = around 5 ml (1 tsp.)



A thumb = 15 ml (1 tbsp.)



A fist = about 250 ml (1 cup)

Determine the amount of carbs using the nutrition facts tables

#### Reference portion ►►►

Do you eat more, less or the same amount as the serving size indicated?

Locate the amount of **carbs**. This amount includes all forms of carbohydrates, namely sugar, starch and fiber.

Subtract the fiber from the total carbohydrates:

**18 g total carbs**  
**- 3 g of fiber**

**= 15 g of carbs** that raise blood sugar.

#### Nutrition Facts

Per 1/2 cup (125 ml)

	% Daily Value*
<b>Calories 150</b>	
<b>Fat 8 g</b>	11%
Saturated 3 g	15%
+ Trans 0 g	
<b>Carbohydrate 18 g</b>	
Fiber 3 g	12%
Sugars 8 g	8%
<b>Protein 4 g</b>	
<b>Cholesterol 0 mg</b>	
<b>Sodium 115 mg</b>	5%
Calcium 16 mg	2%
Iron 0,6 mg	6%

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

## My goals

The best way to successfully change your eating habits is to set personalized goals. Identify one to three goals at a time. They must be realistic, precise, measurable and time bound. Start with what is most important to you and seems easiest to do.

Adopting better eating habits can benefit everyone in your family. Involve them in your positive changes!

### Here are some examples of goals:

- ▶ Starting next Monday, I'll fill half my plate with vegetables at dinner.
- ▶ Starting tomorrow, I'll cook at least one legume-based meal a week.
- ▶ By next month, I'll have reduced my lunchtime fast-food intake to once a week by bringing my lunch.
- ▶ Starting with my next meal, I will pay attention to my hunger and fullness signals by avoiding distractions while eating.

### What are your goals?

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### What are your reasons for wanting to achieve these goals?

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