

Quick guide to carbohydrate counting

Information for patients and families

1. What foods contain carbohydrate?

Our foods are made up of three main components – carbohydrate, fat and protein. Carbohydrates have the largest impact on your blood sugar. When you eat foods that contain carbohydrates, your body breaks them down into sugar and that sugar goes into your blood.

The four main groups of food that contain carbohydrate are:

1. **Starchy foods** – bread, pasta, rice, potatoes, etc.
2. **Fruits and sweet vegetables** – apples, bananas, squash, carrots, etc.
3. **Milk and yogurt**
4. **Sugars** – juice, honey, regular pop, ice cream, chocolate, etc.

2. How much carbohydrate is in my food?

Here are a few resources you can use to find out how much carbohydrate is in your food.

a. St. Michael's Hospital exchange list

We have created a list of common foods and the amount of each that contains 15 grams of carbohydrates. If the amount you are eating is more or less than the amount on the list, you will need to do some math. See the example on the next page.

Example:

Starchy Foods 1 serving = 15 grams of Carbohydrate	
Bread - 1 slice (see label)	Rice, barley (cooked) - 1/3 cup

The chart says that every 1/3 cup of cooked rice has 15 grams of carbohydrate. You plan to eat 1 cup of rice. One cup is three times the amount on the list so you need to multiply by 3 to figure out how much carbohydrate is in 1 cup of rice: 15 grams x 3 = 45 grams of carbohydrates in 1 cup of rice.



It might be helpful to create your own list of foods that you commonly eat and the amount of carbohydrate in your usual serving.

b. Reading nutrition labels

Reading nutrition labels is the best way to get nutritional information about the food you are eating. Here are the four steps for getting information about carbohydrate from the nutrition label.

1. **Check the serving size** – the nutrition label tells you the nutritional information for the listed serving size. If you have more or less than the serving size listed, you will have to do some math.
2. **Find the “Total Carbohydrate” line**
3. **Subtract the fibre** – fibre does not affect your blood sugar, so you need to subtract it from the total carbohydrate
4. **Net carbohydrates** – once you have subtracted the fibre from the total carbohydrate, you are left with the net carbohydrate that will affect your blood sugar

$$\begin{array}{r} \text{Total Carbohydrates} \quad 37 \\ \text{Dietary fibre} \quad \quad \quad - \underline{4} \\ \text{Net carbohydrates} \quad \quad \quad 33 \end{array}$$



Remember to adjust for how much you are eating. In the above example, if you are only having half of the serving on the label, you need to divide by 2 (33 grams ÷ 2 = about 16 grams of net carbohydrate).

c. Websites and Apps

Websites and apps are a great way to quickly look up nutritional information, especially when you are on the go. You can also use apps to help you keep track of how much carbohydrate you are eating.

Websites

- Canadian Nutrient File
- Calorie King
- About Calorie Count
- Restaurant Websites

Apps

- Myfitnesspal
- Lose it
- Carbs Control (\$3.45)
- Track 3 (\$3.99)

3. Putting it all together

Now that you can identify which foods contain carbohydrate and you know where to find out how much carbohydrate they contain, you can figure out the total carbohydrate for your meals.

Lunch

Sandwich (2 slices of bread, turkey, lettuce, mayo) – 30 grams of carbohydrate

+ 1 yogurt – 18 grams of carbohydrate

+ 1 medium banana – 30 grams of carbohydrate

Total carbohydrates = 78 grams of carbohydrate

4. What can I do with this information?

What you do with this information depends on how you manage your diabetes and your own personal goals.

If you are on oral medications and/or basal insulin

Reducing the amount of carbohydrate you eat is one way to help manage your diabetes. Setting carbohydrate goals at each meal can help you reduce the amount of carbohydrate you eat.

If you take set doses of mealtime insulin (meaning you were given a dose from your doctor to always take a certain amount at your meal)

If you take a set amount of insulin with your meals, then you should aim for a set amount of carbohydrate at that meal as well. Keeping the amount of carbohydrate the same will help you to have more consistent blood sugars.

If you would like to vary your carbohydrate intake and insulin at meals

You can work with you diabetes team to set an insulin-to-carbohydrate ratio that will tell you how much insulin you need at your meal based on the amount of carbohydrate you are eating. This option gives you the most flexibility.

St. Michael's cares about your health. For reliable health information, visit our Patient and Family Learning Centre, Room 6-004, 6th floor, Cardinal Carter Wing, or find us online at www.stmichaelshospital.com/learn

This information is not intended as a substitute for professional medical care. Ask your healthcare provider about this information if you have questions.

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