

# LEARN HOW TO COUNT YOUR CARBS: IT'S EASY!

When you have diabetes, what you eat, when you eat, and how much you eat are important choices you make every day. Carb counting is a tool that helps you easily track how many carbohydrates (carbs) you eat. Whether you eat at home or dine out, you can use carb counting to help manage your blood glucose (blood sugar) and your diabetes.

To keep your blood glucose within a target range recommended by the American Diabetes Association (see page 14), it is important to:

- Balance the amount and types of food you eat
- Be active daily
- Take your diabetes medicine as directed
- Check your blood glucose levels

# How Do Food, Insulin, and Physical Activity Affect Your Blood Glucose?

Eating foods that contain carbs raises your blood glucose. Insulin and most types of physical activity lower blood glucose.

## Food

Food contains 3 main nutrients: **carbohydrates**, **protein**, and **fat**. These nutrients provide energy (or fuel) for your body. Insulin is needed for the body to use them.

Carbs are your body's main type of fuel. After eating, the carbs in your food break down into **glucose**, a type of sugar that your body uses for energy. For people with diabetes, eating too many carbs at one time can raise your blood glucose too high. Counting the carbs you eat and drink along with checking your blood glucose can help you learn about the portions of food that are right for you.

## Insulin

In people without diabetes, **insulin** (a hormone made by the pancreas) is released into the blood as needed to keep blood glucose levels in balance. After eating food, the blood glucose level rises, and the body releases insulin into the blood. This helps glucose enter the body's cells where it can be used for energy to fuel the body. In people with diabetes, however, the body does not make insulin, or the amount of insulin that the body makes declines over time.

- **Type 1 diabetes** develops when the pancreas stops making insulin. Insulin must be taken every day.
- **Type 2 diabetes** and **prediabetes** occur when the pancreas cannot make enough insulin or use insulin properly to keep glucose in target ranges, or a combination of both. When your body is not able to use insulin well, this is called **insulin resistance**. Weight gain, inactivity, or family history can cause insulin resistance. The good news is reducing calories, losing weight, and being active can reduce insulin resistance.

## Understand How to Measure Carbohydrates in Carb Choices or Grams of Carbs

To find out how many carbohydrates (carb choices or grams of carbs) you are eating, you need a way to measure the carbs in foods. Use the Nutrition Facts label to see how many grams of carbs (abbreviated “g”) are in a serving of food. When a label is not available, knowing some basics about carb choices in the foods you eat often can help. The unit of measure is:

### 1 carb choice = about 15 grams of carbs

Carb choices can be a way to see which foods have about the same amount of carbs in them. Review the following examples of food portions. Notice how the number of carb choices increases as the amount of food increases.

#### EXAMPLES OF 1 CARB CHOICE (about 15 grams of carbs)

1/3 cup cooked rice **OR** 1 slice (1 oz) of bread  
1 small piece of fruit **OR** 1/2 cup (4 fl oz) fruit juice  
1 cup (8 fl oz) milk **OR** 2/3 cup (6 oz) plain yogurt

#### EXAMPLES OF 2 CARB CHOICES (about 30 grams of carbs)

2/3 cup cooked rice **OR** 2 slices (2 oz) of bread **OR** 1/3 cup cooked rice and 1 slice (1 oz) of bread  
1 large banana\* **OR** 1 cup (8 fl oz) fruit juice **OR** 1/2 large banana\* and 1/2 cup (4 fl oz) fruit juice

#### EXAMPLES OF 3 CARB CHOICES (about 45 grams of carbs)

1 cup cooked rice **OR** 1 medium-sized bagel (3 oz)  
1 small piece of fruit and 2 slices (2 oz) of bread

\* A large banana is about 8 inches.

## Use Food Lists to Count the Carb Choices or Grams of Carbs in Common Foods

When planning meals, it is helpful to know about how many grams of carbs are in foods, especially the foods you like to eat every day. To help you estimate, use the food lists at the end of this booklet (pages 15-17). Refer to these lists often to learn the carb counts of the foods you commonly eat. The lists are very helpful for counting carbs in foods that do not have food labels, such as fresh fruits and vegetables, and also in restaurant foods.

## Use Food Labels for Carb Counting

The Nutrition Facts label shows you how many grams of carbs are in the serving size listed on the label. For carb counting, focus on these 3 parts of the Nutrition Facts label:

**Servings per container** lists the number of servings that are in the package. If there are 2 servings in a package and you eat the whole package, then you have eaten 2 servings.

**Serving size** lists the amount that is considered 1 serving for the food in the package. All the Nutrition Facts information is for this amount of food.

**Total Carbohydrate** on the label is the number of grams of all types of carbs in 1 serving. This includes starches, dietary fiber, natural and added sugars, and sugar alcohol.

<b>Nutrition Facts</b>	
8 servings per container	
<b>Serving size</b>	<b>2/3 cup (55g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>230</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	<b>5%</b>
<i>Trans</i> Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 160mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	<b>14%</b>
Total Sugars 12g	
Includes 10g Added Sugars	<b>20%</b>
<b>Protein</b> 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

Once you know how many carbs to eat at each meal, you can use the Nutrition Facts panel on the food label to decide how much to eat. The serving size on the label may be different from the amount you actually eat.

## Skill Building: Practice Using Labels to Count Carbs

You may need to adjust the amount of carbs you count if your portion size is different from the labeled serving size. Put the amount of food with carbs that you usually eat in a bowl or on a plate. Next, use measuring cups or a food scale to find out the actual amount. Then compare this amount to the serving size on the Nutrition Facts label to figure out how many grams of Total Carbohydrates are in your portion of food. For example:

- If the serving size is 1 cup and you eat  $\frac{1}{2}$  cup, divide the grams of Total Carbohydrate on the label by 2.
- If the serving size is 1 cup and you eat 2 cups, multiply the grams of Total Carbohydrate by 2.

## Estimate Your Portions and How Many Carb Choices You Are Eating

Of course, it is not always practical to use tools like measuring cups and spoons to figure out your portion sizes, and food labels are not always available. Another tool you can use is your hand or a 9-inch plate to estimate portions at your meals and snacks. Once you know that amount, then you can estimate the carb choices.

### Estimate Using Your Hands



**1 small fist = 1 cup = 2 to 3 carb choices (30 to 45 grams of carbs)**

Food example: 1 cup mashed potato, cooked rice, or cooked pasta



**Small adult palm = 3 ounces (oz)** (If your hand is large, it will be more.)

Food example: a common portion size for cooked meat



**Thumb = 1 tablespoon (Tbsp)**

Food example: 1 Tbsp reduced-fat mayonnaise or reduced-fat margarine



**Thumb tip = 1 teaspoon (tsp)**

Food example: 1 tsp margarine, butter, or mayonnaise

## Estimate Using a Plate



Use a 9-inch plate to help plan your meals and manage your portions:

- Use  $\frac{1}{2}$  of the plate for nonstarchy vegetables.
- Use  $\frac{1}{4}$  of the plate for protein foods.
- Use the remaining  $\frac{1}{4}$  of the plate for starchy foods (this is about 30 to 45 grams of carbs, or 2 to 3 carb choices).
- If you have a combination food that contains starch and protein (such as a casserole or spaghetti with meat sauce), fill  $\frac{1}{2}$  of your plate with the combination food. Fill the other half with nonstarchy vegetables.

You can also include fruit and low-fat or fat-free yogurt or milk with this meal. A recommended portion of milk is 1 cup (about 12 grams of carbs or 1 carb choice). A recommended portion of low-fat or fat-free yogurt is  $\frac{2}{3}$  cup (about 12 grams of carbs or 1 carb choice). The portion of fruit should be a small whole fruit or about  $\frac{1}{2}$  to  $\frac{3}{4}$  cup (about 15 grams of carbs or 1 carb choice). Limit added fats (such as nuts or seeds, oil, margarine, mayonnaise, or salad dressing) to small amounts.

## Starch

The following amounts are **1 carb choice (about 15 grams of carbs)**:

### Breads

FOOD	SERVING SIZE
Bagel	¼ large bagel (1 oz)
Biscuit	1 biscuit (2½ inches across)
Bread, white or whole grain	1 slice (1 oz)
Cornbread	1 ¾-inch cube (1½ oz)
English muffin	½ muffin
Hot dog or hamburger bun	½ bun (¾ oz)
Naan, chapati, or roti	1 oz
Pancake	1 pancake (4 inches across, ¼-inch thick)
Pita	½ pita (6 inches across)
Tortilla, corn	1 small tortilla (6 inches across)
Tortilla, flour (white or whole wheat)	1 small tortilla (6 inches across) or ½ large tortilla (10 inches across)
Waffle	1 waffle (4 inches across)

### Starchy Vegetables

FOOD	SERVING SIZE*
Cassava, dasheen, or plantain	⅓ cup
Corn, green peas, mixed vegetables, or parsnips	½ cup
Marinara, pasta, or spaghetti sauce	½ cup
Mixed vegetables (when it includes corn or peas)	1 cup
French fries (oven-baked)	1 cup (2 oz)
Potato, baked with skin	¼ large (3 oz)
Potato, mashed with milk and fat	½ cup
Squash, winter (acorn, butternut)	1 cup
Yam or sweet potato, plain	½ cup (3½ oz)

### Cereals and Grains (Including Pasta and Rice)

FOOD	SERVING SIZE*
Barley, couscous, millet, pasta (white or whole wheat, all shapes and sizes), polenta, quinoa (all colors), or rice (white, brown, and other colors and types)	⅓ cup
Bran cereal (twigs, buds, or flakes), shredded wheat (plain), or sugar-coated cereal	½ cup
Bulgur, kasha, tabbouleh (tabouli), or wild rice	½ cup
Granola cereal	¼ cup
Hot cereal (oats, oatmeal, grits)	½ cup
Unsweetened, ready-to-eat cereal	¾ cup

### Beans and Lentils

FOOD	SERVING SIZE
Baked beans, canned	⅓ cup
Beans (black, garbanzo, kidney, lima, navy, pinto, white), lentils (any color), or peas (black-eyed and split), cooked or canned, drained and rinsed	½ cup

### Crackers and Snacks

FOOD	SERVING SIZE
Crackers, animal	8 crackers
Crackers, graham, 2½-inch square	3 squares
Crackers, saltine or round butter-type	6 crackers
Granola or snack bar	1 bar (¾ oz)
Popcorn, plain	3 cups, popped
Pretzels	¾ oz
Rice cakes, 4 inches across	2 cakes
Snack chips, baked (potato, pita)	about 8 chips (¾ oz)
Snack chips, regular (tortilla, potato)	about 13 chips (1 oz)

\*Serving sizes for all starchy vegetables, grains, and pasta are cooked amounts.