

All About Carbohydrate Counting

Toolkit No. 10

What is carbohydrate counting?

Counting carbohydrates is one way to plan your meals and keep your blood glucose (sugar) on target. Carbohydrates are one of the three main energy sources in food, along with protein and fat. It's the balance between the carbohydrates you eat and insulin that determines how much your blood glucose levels rise after you eat. With the right balance of carbohydrates and insulin, your blood glucose level will usually stay in your target range. Counting carbohydrate servings can help you reach your blood glucose goals and prevent diabetes complications. You can learn to use carbohydrate counting to choose what and how much to eat. Carbohydrate counting can be easier to use than other meal planning methods. If you take insulin, you can use carbohydrate counting to decide how much insulin to take.

Which foods have carbohydrate?

The foods listed in the chart below are mostly carbohydrate. These foods affect your blood glucose much more than other foods such as meat and meat substitutes, vegetables, or fats.

Carbohydrate foods	
<ul style="list-style-type: none"> • bagels, biscuits, bread, crackers, taco shells, and tortillas 	<ul style="list-style-type: none"> • dried beans (such as kidney or pinto beans) and peas (such as black-eyed or split peas)
<ul style="list-style-type: none"> • ready-to-eat or cooked cereal 	<ul style="list-style-type: none"> • fruit (canned, dried, and fresh) and fruit juice
<ul style="list-style-type: none"> • pasta and rice 	<ul style="list-style-type: none"> • milk, soy milk, and yogurt
<ul style="list-style-type: none"> • starchy vegetables such as corn, peas, potatoes, and sweet potatoes 	<ul style="list-style-type: none"> • sweets such as cake, cookies, ice cream, jam, jelly, and sugar
<ul style="list-style-type: none"> • pancakes and waffles 	<ul style="list-style-type: none"> • popcorn, potato chips, and pretzels

Large servings of salads or cooked vegetables (such as 1½ cups of cooked carrots) are counted as carbohydrate servings too. Some foods, such as pizza, casseroles, and soups, are a combination of carbohydrate, protein, and fat.



Carbohydrate counting can help you choose what and how much to eat.

How many servings of carbohydrate foods are best for me at each meal and snack?

The recommended number of servings is based on your weight, activity level, diabetes medications, and goals for your blood glucose levels. A member of your health care team, such as a dietitian, can work with you to make a personalized plan. For many people, having 3 or 4 servings of carbohydrate foods at each meal and 1 or 2 servings for snacks works well.

What about other foods such as meats, vegetables, and fats?

To have a balanced meal plan, you'll want to include protein foods, such as beef, chicken, and fish, as well as vegetables and a moderate amount of healthy fats, such as olive oil and nuts. Talk with your health care team about what to eat for your meals and snacks.

Why should I pay attention to serving sizes for carbohydrate foods?

The amount of carbohydrate you eat can make a big difference in your blood glucose. If you eat more carbohydrate than usual at a meal, your blood glucose level is likely to be higher than usual several hours afterward.

The chart below shows the size of one serving for each food. One carbohydrate serving equals 15 grams of carbohydrate. You can check serving sizes with measuring cups and spoons or a food scale, or by using the Nutrition Facts section on the package.

Serving sizes for some carbohydrate foods (approximately 15 grams of carbohydrate)	
apple: 1 small (4 ounces)	milk: 1 cup
bagel: 1/4 large (1 ounce)	orange juice: 1/2 cup
banana: 1 small (4 ounces)	pasta (cooked): 1/3 cup
biscuit: 1	peach: 1 medium (4 ounces)
bread: 1 slice	peas: 1/2 cup
cake (unfrosted): 2-inch square	pinto beans or kidney beans: 1/2 cup
cereal (ready-to-eat): 3/4 cup	popcorn: 3 cups popped
cereal (cooked): 1/2 cup	potato, mashed: 1/2 cup
cookies: 2 small (about 2/3 ounce)	potato chips: 3/4 ounce (about 15-20)
corn: 1/2 cup	pretzels: 3/4 ounce
crackers (saltines): 6	rice: 1/3 cup
fruit, canned: 1/2 cup	sugar: 1 tablespoon
hamburger bun: 1/2 bun	sweet potato: 1/2 cup
ice cream (light): 1/2 cup	taco shells: 2 (6-inch size)
jam or jelly: 1 tablespoon	tortilla: 1 (6-inch size)

How to use the Nutrition Facts on food labels

To determine your serving size, check the label for the number of carbohydrate grams (g), remembering that one carbohydrate serving is equal to 15 grams of carbohydrate.

- **If the total carbohydrate is 15 grams**, then check the top of the food label for the serving size for one serving.

Nutrition Facts
Serving Size: 6 crackers
Total Carbohydrate: 15g

One carbohydrate serving: 6 crackers

- **If the total is more than 15**, then divide the total by 15. For example, a food with 30 grams of carbohydrate contains 2 carbohydrate servings, because 30 divided by 15 equals 2.

Nutrition Facts
Serving Size: 4 cookies
Total Carbohydrate: 30g

One carbohydrate serving: 2 cookies

- If the total is less than 15, then multiply the serving size so that your serving will have 15 grams of carbohydrate.

Nutrition Facts
Serving Size: 1 piece
Total Carbohydrate: 5g

One carbohydrate serving: 3 pieces

How do I get started with carbohydrate counting?

Ask your health care provider how you can learn more about carbohydrate counting. A dietitian can help you make a plan.

