

Carbohydrate Counting Guide

Carbohydrate Counting — a Tool to Help Manage Your Blood Glucose

When you have diabetes, keeping your blood glucose in a healthy range can help you feel your best today and in the future. Carbohydrate counting, or “carb counting”, is a flexible meal-planning tool (not a diet) that can help you understand how your food choices affect your blood glucose level.

Carbohydrate and Blood Glucose



Carbohydrate is a type of essential nutrient that the body needs. Carbohydrate foods include all sugars: glucose, lactose, maltose, high fructose corn syrup, agave, brown sugar, modified food starch, and honey. Foods such as milk, fruit, bread and pasta are also considered carbohydrate foods.

Any carbohydrate food you eat is digested into glucose, which causes your blood glucose level to increase. However, carbohydrates are not “bad” and you don’t need to eliminate them from your diet because of the following reasons:

- Carbohydrates provide energy and essential nutrients for your body.
- Many carbohydrates come with vitamins and minerals and include grains, starchy vegetables, fruits and milk.
- Fiber is found in carbohydrate foods. Fiber helps to control blood sugar and makes us feel full faster.



To better manage your blood glucose, energy levels and weight, pay attention to how much carbohydrate you eat.

Carbohydrate Choices and Portion Sizes

- A “carbohydrate choice”, or “carbohydrate serving”, is a portion of food, such as a 1-ounce slice of bread, that has 15 grams of carbohydrate (1 carbohydrate choice/serving = 15 grams of carbohydrate). The idea is that total carbohydrate from any food often has a similar effect on blood glucose levels.
- Measuring or weighing foods can help you learn what common portion sizes look like. If you do not have access to a scale or measuring cups, refer to these hand-estimated illustrations.



Fist = 1 cup

Example: three servings of pasta or two servings oatmeal (one cup pasta = three servings)



Palm or deck of cards = 3 oz.

Example: a cooked serving of meat



ThumbTip = 1 teaspoon

Example: a serving of mayonnaise or margarine



Handful = 1 or 2 oz. snack food

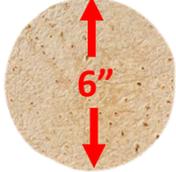
Example: One ounce nuts = one handful
Two ounces pretzels = two handfuls



Thumb = 1 oz.

Example: a piece of cheese

Carbohydrate Foods

Bread, Grains, and Cereals	Milk and Yogurt	Fruits	Vegetables and Beans	Sweets and Snack Foods	Mixed Foods
The following food items each contains 1 carbohydrate (carb) choice/serving=15 grams of carbohydrate					Can contain multiple carbohydrate choices
<ul style="list-style-type: none"> 1 slice bread  ¼ large bagel  One 6" tortilla  1/3 cup cooked rice or pasta  1 cup soup ¾ ounce unsweetened cold cereal (serving sizes vary, check label) ½ cup cooked cereal 3 cups air-popped popcorn 	<ul style="list-style-type: none"> 1 cup milk 1 cup low-fat/skim milk,  6 ounces low-fat/fat-free plain/Greek yogurt 6 ounces flavored yogurt made with low-cal sweetener (these vary, check label)  	<ul style="list-style-type: none"> 1 small piece fresh fruit  ½ medium fruit (apple, banana)  ¾ cup blueberries 1 cup blackberries 1 cup raspberries 1 ¼ cup strawberries  1 ¼ cup watermelon 1 cup honeydew or cantaloupe ½ cup canned fruit in own juice ½ cup fruit juice  2 TBSP dried fruit 	<ul style="list-style-type: none"> ½ cup cooked beans, legumes (garbanzo, kidney, black beans)  ½ cup potato, sweet potato, peas, corn  1/3 cup cooked cassava, yam, taro  1 cup winter squash  1/3 plantain (green or yellow) 	<ul style="list-style-type: none"> 1 TBSP sugar or honey  ¾ ounce snack food (pretzels, 4-6 crackers) 8 pieces of baked chips (potato, pita) 13 pieces of regular chips (tortilla, potato)  1 ounce sweet snack (2 small sandwich cookies, 5 vanilla wafers)  ½ cup regular ice cream 	<ul style="list-style-type: none"> 1 regular sandwich = 2 carb choices = about 30 grams of carbohydrates  One 6" sub sandwich = 3 carb choices = about 45 grams of carbohydrates  1 burrito or enchilada = 3 carb choices = about 45 grams of carbohydrates  1 cup lasagna = 2 carb choices = about 60 grams of carbohydrates 

The lists above provide a basic idea of the carb count in common foods. Each portion is one carbohydrate choice (15 grams of carbohydrate). Foods with fewer than 20 calories and fewer than 5 grams of carbohydrate are considered "free." These include sugar-free beverages, sugar substitutes, spices and seasonings.

How Many Carbohydrate Servings Can I Have?

- Most women need 3-4 carbohydrate servings (45-60 grams) at each meal
- Most men need 4-5 carbohydrate servings (60-75 grams) at each meal
- Snacks should be limited to 1-2 carbohydrate servings (15-30 grams)

The specific number of carbohydrate servings you need depends on your age, body size, activity level and weight management goals.

Sample 4-Carbohydrate-Serving Lunch Ideas

1 Whole Grain Ham&Cheese Sandwich	2 Carbohydrate Servings
1 Cup of Milk	1 Carbohydrate Serving
1 Cup of Black Berries	1 Carbohydrate Serving
2 Cups of Spring Mix Vegetables	0-1 Carbohydrate Serving

How to Estimate Carb Servings from a Food Label?

Nutrition Facts	
Serving Size 1 cup (8 oz)	
Servings per container 3	
Amount Per Serving	
Calories 163	Calories from fat 27
% Daily Value	
Total Fat 3 g	4%
Saturated Fat 0 g	0%
Cholesterol 10 mg	3%
Sodium 300mg	12%
Total Carbohydrates 32 g	10%
Dietary Fiber 5 g	20%
Sugars 3 g	
Protein 2 g	

Step 1: Look at the serving size.

Step 2: Look at the total grams (g) of carbohydrate only. Sugars are already counted in the total carbohydrate.

Step 3: Use the scale below to know how many carb servings you're eating.

Close to 15 g	1 carb serving
Close to 30 g	2 carb servings
Close to 45 g	3 carb servings
Close to 60 g	4 carb servings
Close to 75 g	5 carb servings

1 Cup Pasta Primavera	3 Carbohydrate Servings
1 piece of Chicken Breast	0 Carbohydrate Serving
1 Small Apple	1 Carbohydrate Serving
2 Cups of Spinach Sprinkled with Nuts	0-1 Carbohydrate Serving

Better Carbohydrate Choices

Carbohydrate counting is important, but the type of carbohydrate also is important for both blood glucose and overall health. All carbohydrates are not the same. Choose better carbohydrate choices, such as whole grains and less-processed foods.

- Opt for beans and other legumes.
- Select whole grain bread, whole grain pasta and brown rice over white (refined) varieties.
- Experiment with many types of whole grains, including barley, oatmeal, quinoa and bulgur.
- Go for whole fruits instead of fruit juice or sugary foods.
- Select a variety of vegetables such as cauliflower, tomato, carrots and spinach (most vegetables are great choices).



Resources: This handout is adapted from the Scripps Whittier Diabetes Institute and the Academy of Nutrition and Dietetics.

1. Diabetes Care and Education Dietetic Practice Group. Ready, set, start counting! . 2014.
2. Scripps Diabetes Care. What is a carb serving? . 2015.
3. Scripps Diabetes Care. Estimating portion sizes. . 2015.
4. Scripps Diabetes Care & Prevention. Diabetes and healthy eating. . 2017.