Carbohydrate Counting

What is Carbohydrate Counting?

Carbohydrate counting is a meal-planning tool that many people use to manage their blood sugar. Carbohydrate counting, or 'carb counting', is done by tracking the amount of carbohydrates eaten at meals and snacks.

Carbohydrates are a type of nutrient found in starchy and sweet foods. When starchy or sweet foods are eaten, the body breaks the carbohydrates in the foods down into glucose. This glucose is released into the blood. Another name for glucose in the blood is blood sugar.

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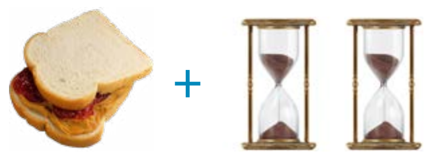
There are four steps in carbohydrate counting:

1. **Timing**
2. **Amount**
3. **Balance**
4. **Monitoring**

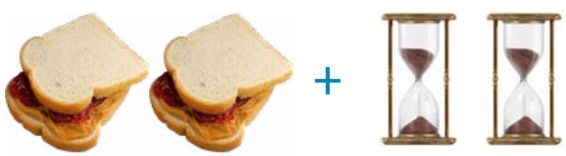
Step 1: Timing

A moderate amount of carbohydrate foods gets broken down into a moderate amount of blood sugar.



= Blood sugar 140

Two hours after eating one sandwich, this person's blood sugar is 140.



= Blood sugar 210

Two hours after eating two sandwiches, the same person's blood sugar is 210.

The amount of carbohydrates eaten at one time is what has the biggest effect on blood sugar. For this reason, its important to space carbohydrate foods throughout the day. This means, even if you don't eat carbohydrate foods all day long, you aren't able to save up and have extra later on, without having your blood sugar go too high.

Ways you can help with the timing of your carbohydrates:

- Eat three meals a day
- Have a small snack between meals if needed (this can help some people not eat too much at meals)

Step 2: Amount

The amount of carbohydrates a person can eat at a meal and still control their blood sugar can be different for different people. There are many things that affect how a body is able to control blood sugar.

For most people with diabetes, 45 grams of carbohydrates (or 3 choices) at a meal is a good place to start. Some people may be able to eat a little more carbs at a meal; some people may need to eat a little less.

Foods with carbohydrates:

- Soda pop, juice, Tang, Kool-Aid, and other sweet drinks
- Starchy vegetables like potatoes, corn, squash, beans and peas
- Rice, noodles, oatmeal, cereals, breads, crackers
- Milk and yogurt
- Beans
- Chips, cookies, cakes, ice cream
- Fruit and fruit juice

In diabetes meal planning, one choice of carbohydrates has about 15 grams of carbohydrates. For most people trying to keep their blood sugars in a healthy range, eating about 3 or 4 choices of carbohydrate foods (45-60 grams) at a meal is a good place to start. A good amount of carbohydrates for snacks is usually around 1-2 carb choices (or 15-30 grams).

Food List of Carbohydrate Choices

Each serving has about 15 grams of Carbohydrates
Choose 3-4 choices (or 45-60 grams) of these foods per meal
Choose 1-2 choices (or 15-30 grams) of these foods per snack

Starches	
Bread or large pilot bread	1 piece
Cooked rice or noodles	1/3 cup
Oatmeal, cooked	1/2 cup
Crackers	4 crackers
Hamburger or hotdog bun	1/2
Beans, corn, peas or cooked potatoes	1/2 cup
Popped popcorn	3 cups

Milk & Dairy	
Milk	1 cup
Plain yogurt	6 oz

Fruit	
Fresh fruit	1 piece
Canned fruit	1/2 cup
Banana	1/2
Berries	1 cup
100% fruit juice	1/2 cup
Raisins	2 Tbsp
Dried fruit	1/4 cup

Sweets and Desserts	
Cookies	2 small
Ice cream	1/2 cup
Cake without frosting	2 inch square
Syrup, honey or jelly	1 Tablespoon
Agutuk	1/2 cup berries with 1 ½ tsps of sugar

My Food Plan

Breakfast:

________ Carb Choices (or _______ grams of carbohydrate)

____

____

Lunch:

________ Carb Choices (or _______ grams of carbohydrate)

____

____

Dinner:

________ Carb Choices (or _______ grams of carbohydrate)

____

____

Evening Snack:

________ Carb Choices (or _______ grams of carbohydrate)

____

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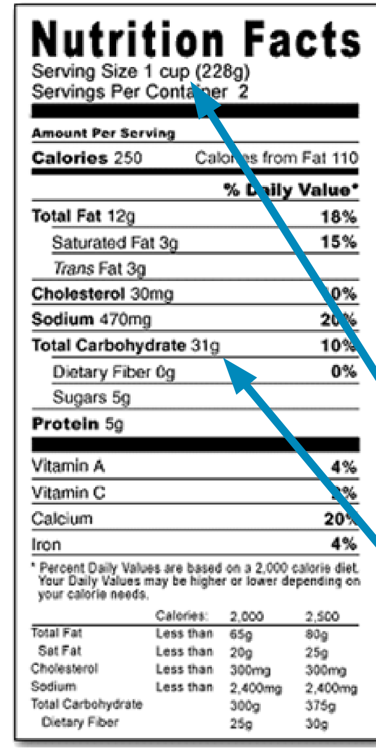

Total Grams of Carbohydrates	Carb Choices
0-5	0
6-10	1/2
11-20	1
21-25	1 ½
26-35	2
36-40	2 ½
41-50	3
51-55	3 ½
56-65	4
66-70	4 ½
71-80	5

Reading Food Labels for Carbohydrates

The best way to know how much carbohydrate is in store food is to read the Nutrition Facts label on the package.

The Nutrition Facts label lists the grams of total carbohydrate in 1 serving. The label's serving may be larger or smaller than 1 carbohydrate serving.

To figure out how many carbohydrate servings are in the food:

Look first at the label's **serving size**. All the nutrition facts information is based on this serving size. If you eat double the serving size, you will need to double the grams of carbohydrate.

Then check the **grams of total carbohydrate**. This is the amount of carbohydrate in 1 serving. Total carbohydrates include sugar, fiber and sugar alcohols. You can use this number to calculate carbohydrate choices. (See the conversion chart at right).

**Note: When counting carbohydrates, ignore the grams of sugars on the Nutrition Facts panel because they are included in the grams of total carbohydrate.*

Step 3: Balance

When you carb count, it can be easy to forget about protein and fat. Including a protein food and a healthy fat to your meal provides other important nutrients and gives your meal balance.

Step 4: Monitor

How will you know if your carbohydrate counting plan and medication plan are working for you?

Checking your blood sugar with a home blood glucose monitor is the only way to know what your blood sugar is doing at a point in time. Writing down what you ate and your blood sugar before and 2 hours after a meal can help both you and your diabetes team learn how to adjust your diabetes treatment plan to best control your blood sugars.

The ANTHC Diabetes Program and the American Diabetes Association suggests the following targets for most nonpregnant adults with diabetes.

Before a meal (preprandial plasma glucose): 80–130 mg/dl

2 hours after beginning of the meal: Less than 180 mg/dl

A log can be done on any piece of paper, or a form can be used. There is a form printed on the next page.

Week of: ______			Breakfast			Lunch			Dinner			Bedtime
			Before	2 Hr. After	Carbs/ Insulin	Before	2 Hr. After	Carbs/ Insulin	Before	2 Hr. After	Carbs/ Insulin	
M	BG											
	Time											
T	BG											
	Time											
W	BG											
	Time											
Th	BG											
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S	BG											
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	Time											

More Information

For more information or if you have questions, contact:

Diabetes Educator: ______________________

Phone: ______________________________

Diabetes Program
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www.anthc.org/diabetes
(907) 729-1125