

# A Beginner's Guide to Carbohydrate Counting



Pia Pizzolato MS, RD

This slide show explains:

- What foods contain carbohydrates
- How much of these foods you can eat
- Where to look up the carb content of foods

Pia has a Bachelors Degree in Clinical Nutrition from Cornell University and a Masters of Science in Nutrition from New York University. She completed a dietetic internship at the Bronx Veterans Medical Center in order to become a registered dietitian.

Prior to joining BD, Pia educated people with diabetes about medical nutrition therapy in a private physicians office, an outpatient clinic at a hospital and a nursing home where she counseled patients one-on-one and in group classes.



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**Many people believe that a diabetes meal plan means that you just have to cut back on sugar.**

## **This is not true!**

Carbohydrates (carbs) have the greatest effect on your blood sugar.

90 to 100 percent of the carbs you eat appear in your bloodstream as blood glucose within minutes to hours after you have eaten.

You may be asked to count the carbs that you eat.

### **The carbs you will need to count are both:**

- starches that break down slowly into sugar
- simple sugars that break down into blood glucose almost right away



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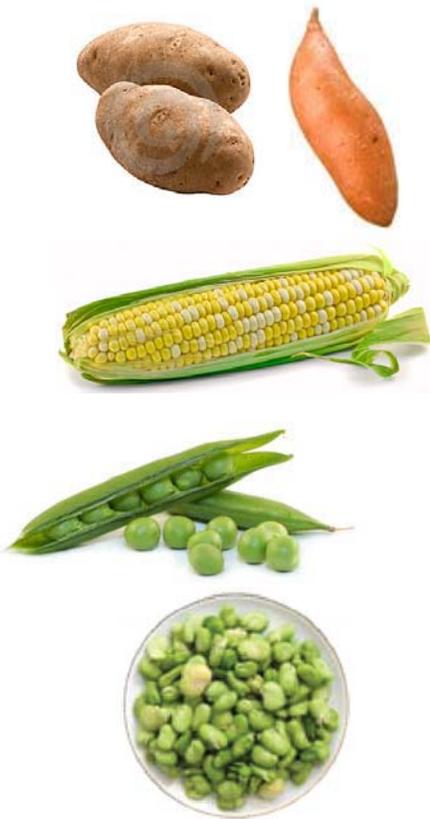
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# Starches include certain vegetables, all grains, and products made from grains

All of these foods contain starches:

## Starchy Vegetables

Regular and sweet potatoes, corn, fresh peas and lima beans



## Legumes

Dried beans and peas



## Grains

Grains like wheat, oats, barley, and rice



Products made from grains, such as pasta, bread, rolls, bagels, crackers, cereals and baked goods



# Sugars include the natural sugars in fruit and milk, plus certain sweeteners added to prepared foods and drinks

All of these foods contain sugars:

**Fruit and fruit juices**  
Foods that contain fruit or fruit juices such as jams, jellies, and fruit smoothies



**Sweet bakery products**  
such as cake with icing, pie, donuts, candy, and cookies



**Sugary drinks**  
such as regular soda and fruit drinks



**Sweet condiments**  
such as barbeque sauce, relish and ketchup



**Milk and yogurt**



## Sugar goes by many names...

Some of the names for sugar that you may find in the ingredients include:

table sugar

brown sugar

molasses

honey

beet sugar

cane sugar

confectioner's sugar

powdered sugar

raw sugar

turbinado

maple syrup

high-fructose corn syrup

agave nectar

sugar cane syrup

fructose

lactose

sorbitol

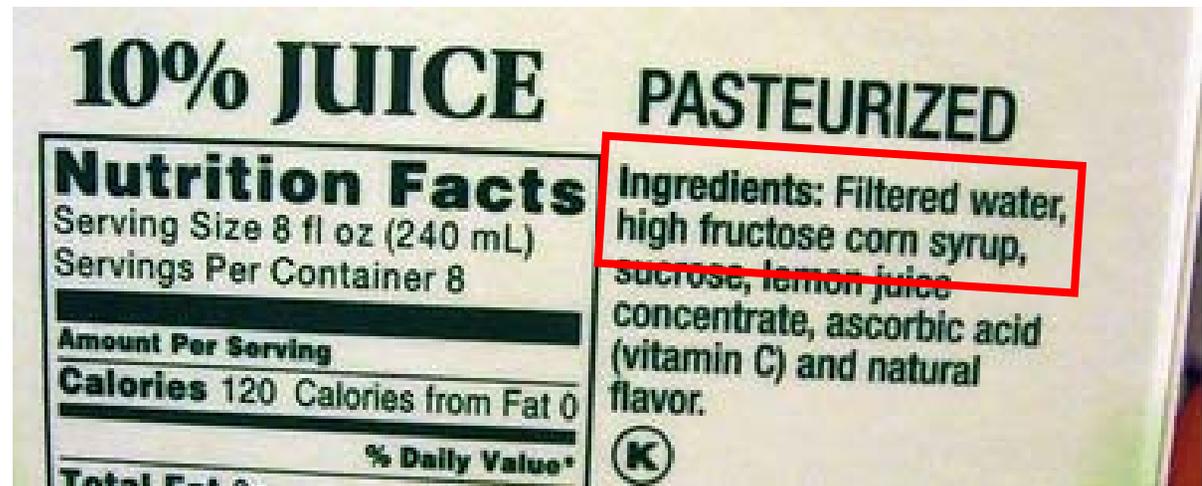
xylitol

glycol

glycerol

mannitol

isomalt and other sugar alcohols

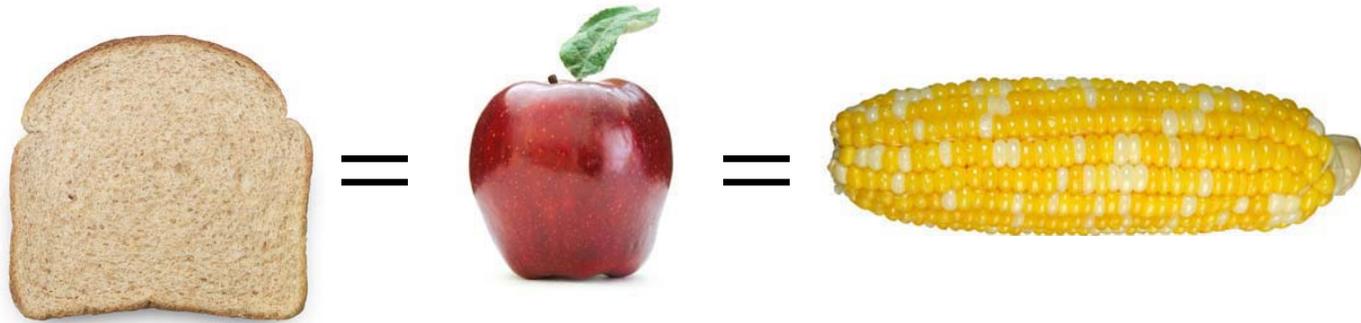


## Carb Counting

Being more aware of the carbohydrates you eat, or counting the carbs in your meals, can help you match your medication or activity levels to the food you eat. This can help you to better control your blood glucose.

One serving of carbohydrate is measured as 15 grams.  
A food that contains 15 grams of carbohydrate is called “one carb serving”.

For example, one slice of bread, a small piece of fruit, or a ear of corn each have around 15 grams of carb. Each of these equals one carb serving.



## Carb Counting

Here are examples of the carb amounts in specific foods:

1 cup cooked pasta or 1 cup cooked rice	45g carbohydrate
Whole English muffin	30g carbohydrate
3 cups popped popcorn	15g carbohydrate
Medium potato	30g carbohydrate
1 cup corn or peas	30g carbohydrate
1½ cups veggies (green beans, broccoli, or carrots, cooked)	15g carbohydrate
Small fruit (apple, orange, nectarine)	15g carbohydrate
17 grapes, 12 cherries, ½ cup applesauce	15g carbohydrate
1 cup milk	12g carbohydrate
1 container (6oz.) yogurt, flavored, artificially sweetened	12g carbohydrate
½ cup vanilla ice cream	15g carbohydrate
½ cup sherbet	30g carbohydrate
2 small cookies	15g carbohydrate



## All carbohydrates affect blood sugar in the same way.

It is the amount of carb you eat that is important, not the type of carb.

A serving of ice cream does not raise blood sugar higher than one equal carb serving of potatoes, rice, or pasta. This is true whether you have type 1 or type 2 diabetes.

For example: These three foods will all raise your blood sugar by the same amount:

- 1 cup of vanilla ice cream that has 30 grams of carbs
- A 2 oz. roll that has 30 grams of carbs
- 2/3 cup of spaghetti that has 30 grams of carbs

### Same impact on blood sugar:



**30 grams of carb**  
1 cup serving

=



**30 grams of carb**  
2 oz. roll

=



**30 grams of carb**  
2/3 cup



**“Sugar-free” and “no sugar added” foods may still contain a large amount of carbs.**



Sugar-free apple pie has carbohydrates from the apples and the pie crust.

This sugar-free pudding contains 8 grams of carb per ½ cup serving:



Sugar-free pudding has carbohydrates from the milk.

## Nutrition Facts

**Serving Size:** 1/2 cup • 11g

**Amount Per Serving**

<b>Calories</b>	80	Calories from Fat	0
			% DV
<b>Total Fat</b>	0g		0%
Saturated Fat	0g		0%
Trans Fat	0g		
<b>Cholesterol</b>	0mg		0%
<b>Sodium</b>	300mg		12%
<b>Total Carbohydrate</b>	8g		3%
Dietary Fiber	<1g		0%
Sugars	0g		
<b>Protein</b>	<1g		0%
Vitamin A	4%	Vitamin C	0%
Calcium	15%	Iron	4%

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Percent of Calories from:  
**Fat-0% Carb-40% Protein-0%**  
 (Total may not equate 100% due to rounding.)

\*Percent Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

Nutrient		2,000	2,500
		Calories	Calories
Total Fat	less than	65 g	80 g
Saturated Fat	less than	20 g	25 g
Cholesterol	less than	300 mg	300 mg
Sodium	less than	2400 mg	2400 mg
Total Carbohydrates		300 g	375 g
Fiber		25 g	30 g

**1 g Fat = 9 calories      1 g Carbohydrate = 4 calories**  
**1 g Protein = 4 calories      1 g Alcohol = 7 calories**



## Basic Carb Counting Using Grams

Your meal plan may call for you to eat a specified amount of carbohydrate at each meal or snack.

You do not have to eat the same foods everyday. Your food choices can change from day to day as long as the total carbs specified for each meal and snack stay about the same.

Being consistent is the key to successful carb counting.

For example, if you need to eat around 45 grams of carb for breakfast, here are two different breakfasts that each total around 45 grams of carb:

Breakfast #1	
2 slices of whole wheat toast	30 grams
1 tablespoon jam	15
Egg substitute or egg whites	0
Black coffee with sugar substitute	0
<b>Total grams of carbohydrate:</b>	<b>45 grams</b>



Breakfast #2	
$\frac{3}{4}$ cup of bran cereal	23 grams
$\frac{1}{2}$ cup of milk	6
$\frac{1}{2}$ banana	15
Black coffee with sugar substitute	0
<b>Total grams of carbohydrate:</b>	<b>44 grams</b>

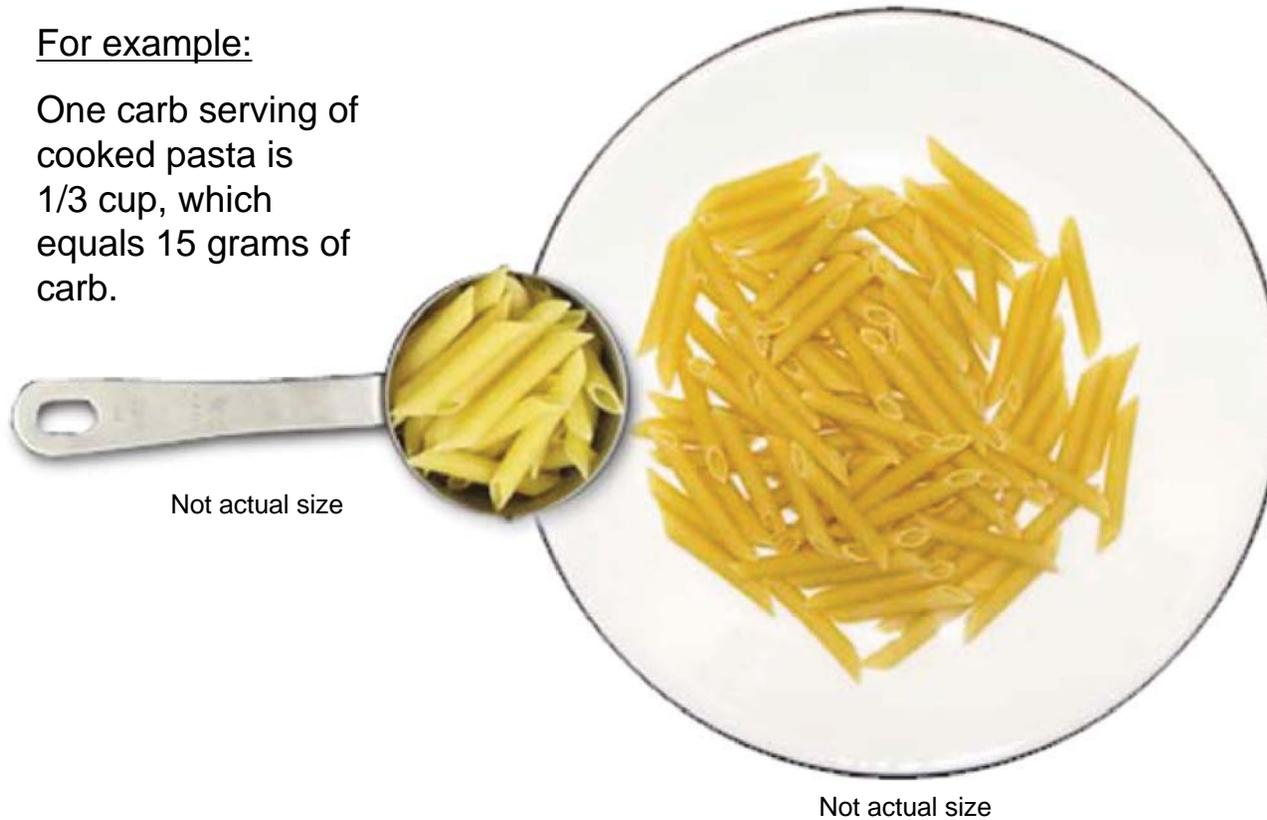


## Portion Sizes Matter, so Read Food Labels!

What you think of as a portion may actually count as several carb servings.

For example:

One carb serving of cooked pasta is 1/3 cup, which equals 15 grams of carb.



If you eat 1 cup of cooked pasta, your portion is actually 3 carb servings, totaling 45 grams of carb.



# Reading the Food Label

You will find the serving size and the grams of carbohydrate per serving on food labels:

Serving size is here 

Total carbohydrates per serving are here 

<b>Nutrition Facts</b>	
Serving Size: 1/2 cup • 11g	
<b>Amount Per Serving</b>	
Calories 80	Calories from Fat 0
% DV	
<b>Total Fat</b> 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
<b>Cholesterol</b> 0mg	0%
<b>Sodium</b> 300mg	12%
<b>Total Carbohydrate</b> 8g	3%
Dietary Fiber <1g	0%
Sugars 0g	
<b>Protein</b> <1g	0%
Vitamin A 4%	Vitamin C 0%
Calcium 15%	Iron 4%
Unofficial Pts: 2 <span style="float: right;">@DietFacts.com</span>	
Percent of Calories from: <b>Fat-0% Carb-40% Protein-0%</b> (Total may not equate 100% due to rounding.)	
*Percent Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
<u>Nutrient</u>	<u>2,000</u> <u>2,500</u> <u>Calories</u> <u>Calories</u>
Total Fat	less than 65 g 80 g
Saturated Fat	less than 20 g 25 g
Cholesterol	less than 300 mg 300 mg
Sodium	less than 2400 mg 2400 mg
Total Carbohydrates	300 g 375 g
Fiber	25 g 30 g
<b>1 g Fat = 9 calories</b>	<b>1 g Carbohydrate = 4 calories</b>
<b>1 g Protein = 4 calories</b>	<b>1 g Alcohol = 7 calories</b>

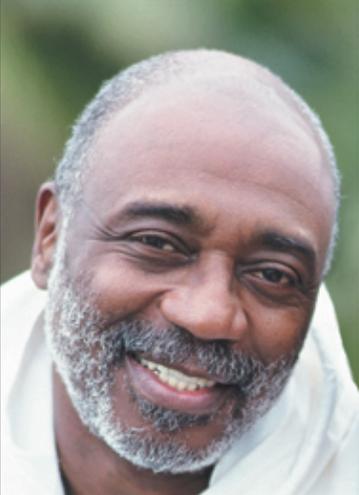


## How many carbs should people with diabetes eat?

Everyone needs a different amount of carb.

The amount that is best for you depends on your age, height, weight, level of physical activity, current blood glucose level, and your blood glucose targets.

Your doctor or dietitian will give you specific carbohydrate targets for each meal and snack.

Carb limits for Women	Carb limits for Men
 <p data-bbox="533 727 900 846">Carbs in a meal <b>30 to 60 grams</b></p> <p data-bbox="533 906 900 1084">Carbs in snacks <b>15 to 30 grams</b></p>	 <p data-bbox="1306 727 1673 846">Carbs in a meal <b>45 to 75 grams</b></p> <p data-bbox="1306 906 1673 1084">Carbs in snacks <b>15 to 30 grams</b></p>

If you are trying to lose weight, your doctor may ask you to use the lower number in these ranges for your carb counts by meal.



## General Eating Tips

Follow these general eating tips:

- Try not to skip meals
- Eat regularly and space out your carbohydrates evenly throughout the day. This can help you to maintain better blood glucose control.
- Balance your meals: include a good source of carbohydrate, lean protein and/or a healthy fat in each meal.
- Include daily: 1½ cups of veggies, 2 to 3 servings of fruit, 1 to 3 cups of low fat milk or yogurt.
- Drink water! It can help you to feel full, so that you do not eat as much.



## Where can you look up the carb content and serving sizes of foods?

The American Dietetic Association describes the grams of carbohydrate in a wide range of foods.

The page on their web site is called:

Food Nutrient Data for Choose Your Foods: Exchange Lists for Diabetes, 2007

The web address is:

[http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition\\_13961\\_ENU\\_HTML.htm](http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_13961_ENU_HTML.htm)



At the bottom of the page are lists you can download and print:



### Exchange Lists

- [Alcohol](#)
- [Combination Foods](#)
- [Fast Foods](#)
- [Fats](#)
- [Free Foods](#)
- [Fruits](#)
- [Meat and Meat Substitutes](#)
- [Milk](#)
- [Non-Starchy Vegetables](#)
- [Starch](#)
- [Sweets, Desserts and other Carbohydrates](#)

