What is carbohydrate counting?

Let's start with a little background. Carbohydrates are essential in our diet. Foods that contain carbohydrates include:

- Breads and cereals
- Grains such as rice, pasta, and crackers
- Fruit and vegetables
- Milk and yogurt
- Desserts
- Snack Foods
- Sweetened beverages
- Sugar

Some vegetables such as beans, corn and potatoes contain a higher amount of carbohydrate than other vegetables such as zucchini, lettuce, peppers, tomatoes, and cucumbers.

Carbohydrates provide energy along with fiber, vitamins and minerals; so they are an important part of a healthy diet. When carbohydrates are broken down during digestion, the end product is glucose. Glucose is the basic energy source for the cell. Insulin is a hormone that gets glucose from the blood into the cell where it is used for energy. Diabetes is a disease where the body does not produce enough insulin.

Controlling the carbohydrate content of meals is the first step to control blood glucose (also called blood sugar) Carbohydrate counting or carb counting for short is a tool to evaluate the amount of carbohydrate in a food or meal. If you can estimate the carbohydrate content of a meal or snack you can adjust your insulin dose to accurately cover the meal, plan meals with consistent carbohydrate content and more tightly manage your child’s blood sugar.

Protein and fat do not affect blood sugar directly. For the purposes of carbohydrate counting, foods such as meats, eggs, oils, dressings which contain very little carbohydrate are not counted.

Basic Carbohydrate Guide

15 grams of carbohydrate:
- 1/2 English muffin
- 1/4 cup peas or beans
- 1 slice of bread
- 1 cup cereal (flakes)
- 1/3 cup potato, rice or pasta
- 1/2 cup of vanilla ice cream
- 1 small sized piece of fruit – orange, apple, peach
- 1/2 cup unsweetened applesauce
- 1/2 cup cooked or canned fruit – not in syrup
- 1/2 cup of fruit juice
- 1/2 banana
- *Check the nutrition label for desserts, snack foods and sweetened beverages.

10 grams of carbohydrates:
- 1/2 - 1 cup of fresh fruit
- 1 cup of milk or sugar-free yogurt

5 grams of carbohydrate:
- 1 cup raw vegetable
- 1/2 cup cooked vegetable

0 carbohydrate:
- Meats – poultry, fish, beef, pork
- Eggs
- Margarine
- Butter
- Nuts
- Spices and seasonings

Resources for more detailed nutrient content:

A free resource that has been set up as a simple way of finding the carbohydrate content in a variety of foods
Food Labels – Nutrition Facts
1) Check the serving size and the number of servings per container. Notice the calories/serving.

2) Use the “Total Carbohydrate” number, it is expressed in grams. The sample label on the right shows 31 grams of carbohydrate for each 1 cup serving.

3) Is it a good food choice? Use the Nutrition Facts label to make a decision about whether to include a food or beverage. How does this food fit in to your child’s nutrition prescription?

Carbohydrate Counting for a Day
Let’s look at these sample meals and count the carbs:

Breakfast:  
½ cup oatmeal 15  
1 slice toast with margarine 15  
1 egg 0  
½ cup orange juice 15  
40  

Lunch:  
Sandwich with:  
2 slices bread 30  
2 oz. turkey 0  
Lettuce, tomato 2  
Mayonnaise 0  
½ cup grapes 10  
1 cup milk 10  
52  

Snack:  
1 graham cracker 10  
1 cup milk 10  
20  

Dinner:  
Chicken leg 0  
1/3 cup mashed potato 15  
½ cup broccoli 5  
½ cup applesauce 10  
1 cup milk 10  
40

Insulin Dose
When you’re able to calculate the carbohydrate content of a meal or snack your doctor may give you guidelines to adjust your insulin dose.
Typical dose scales are 1 unit of insulin for each 10 or 15 grams of carbohydrate. So for the sample meals on the left, insulin dose may vary from 3 or 4 units at breakfast and dinner to 4 or 5 units at lunch and 1 unit for the snack. The exact ratio of insulin to carbohydrate is prescribed by your physician.

When you plan meals, think of the Carb containing foods in blocks of the Carb units prescribed, for examples blocks of 15. For dinner to the left, 1, 2, 3 Carb units and there you have it, you are carbohydrate counting!

For More Information About Carb Counting:  
The American Diabetes Association provides free information at -  