# Carbohydrates & Protein

Carbohydrates and protein are two of the three macronutrients, with the third being fat. Both carbs and protein play important roles in a balanced diet, whatever your goals may be. Combining carbohydrate and protein could be beneficial.

# How Much Carbohydrate?

How much carbohydrate you eat is very individual. Finding the right amount of carbohydrate depends on many things including how active you are and what, if any, medicines you take. Some people are active and can eat more carbohydrate. Others may need to have less carbohydrate to keep their blood glucose in control.

Finding the balance for yourself is important so you can feel your best, do the things you enjoy, and lower your risk of diabetes complications. A place to start is at about 45-60 grams of carbohydrate at a meal. You may need more or less carbohydrate at meals depending on how you manage your diabetes.

# What Foods Have Carbohydrate?

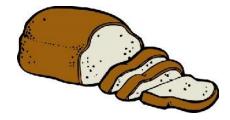
Foods that contain carbohydrate or "carbs" are:

- grains like rice, oatmeal, and barley
- grain-based foods like bread, cereal, pasta, and crackers
- starchy vegetables like potatoes, peas and corn
- fruit and juice
- milk and yogurt
- dried beans like pinto beans and soy products like veggie burgers
- sweets and snack foods like sodas, juice drinks, cake, cookies, candy, and chips

Non-starchy vegetables like lettuce, cucumbers, broccoli, and cauliflower have a little bit of carbohydrate but in general are very low.

# How Much Carbohydrate is in These Foods?

Reading food labels is a great way to know how much carbohydrate is in a food. For foods that do not have a label, you have to estimate how much carbohydrate is in it. Keeping general serving sizes in mind will help you estimate how much carbohydrate you are eating.



#### For example there is about 15 grams of carbohydrate in:

- 1 small piece of fresh fruit (4 oz)
- 1 slice of bread (1 oz) or 1 (6 inch) tortilla
- 1/2 cup of oatmeal, beans or starchy vegetable
- 1/3 cup of pasta or rice
- 4-6 crackers

- 1/2 English muffin or hamburger bun
- 1 Tbsp syrup, jam, jelly, sugar or honey
- 1/2 cup ice cream or sherbet
- 1 cup milk
- 2/3 cup of plain yogurt

### Protein and Fat

With carbohydrate counting, it is easy to forget about the protein and fat in meals. Always include a source of protein and healthy fat to balance out your meal. The main benefit to consuming protein and carbs together in a meal is that this may aid satiety and controls blood sugar. Adding protein to a meal reduced the glycemic index of a carbohydrate. This means that it slowed the speed at which the carbs were broken down into sugar in the bloodstream. From an athletic performance standpoint, consuming both carbs and protein after a workout in a 3-to-1 ratio may also be beneficial. The carbs help to replenish glycogen (stored energy in the muscles), while protein repairs damaged muscle tissue.

# Using Food Labels

Carbohydrate counting is easier when food labels are available. You can look at how much carbohydrate is in the foods you want to eat and decide how much of the food you can eat. The two most important lines with carbohydrate counting are the serving size and the total carbohydrate amount.

- Look at the **serving size**. All the information on the label is about this serving of food. If you will be eating a larger serving, then you will need to double or triple the information on the label.
- Look at the grams of total carbohydrate.
- Total carbohydrate on the label includes sugar, starch, and fiber.
- Know the amount of carb you can eat, figure out the portion size to match.
- If you are trying to lose weight, look at the **calories**. Comparing products can be helpful to find those lower in calories per serving.
- To cut risk of heart disease and stroke, look at **saturated and trans fats**. Look for products with the lowest amount of saturated and trans fats per serving.
- For people with high blood pressure, look at the **sodium**. Look for foods with less sodium.

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