



UNIVERSITY OF GEORGIA
EXTENSION

Carbohydrates and Fiber

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Did You Know?

- Carbohydrates are the body's main source of energy.
- Carbohydrates have the greatest influence on blood glucose (blood sugar), compared with protein or fat.
- Carbohydrate food sources can offer a variety of vitamins, minerals, and other nutrients.

Individuals with diabetes must be aware of how many carbohydrates they eat, but they don't need to avoid or eliminate them altogether. Spreading carbohydrate choices evenly throughout the day helps to prevent spikes (hyperglycemia) and dips (hypoglycemia) in blood glucose.

Fiber is a carbohydrate. For people with diabetes, getting enough fiber each day is associated with a lower risk of dying from any cause.

Types of Carbohydrates

- **Starches** are found in breads, cereals, pasta, rice, crackers, beans, peas, and starchy vegetables (potatoes, winter squash, corn, and others).
- **Sugars** are found naturally in fruit or milk. **Added sugars** like table sugar, honey, or corn syrup are often added to processed foods such as cereals, soda, yogurts, and condiments.
- **Fiber** is found in plant foods, including whole grains, vegetables, and fruits; it has less of an impact on blood glucose compared to starches and sugars.

High-Fiber Foods

Foods can be high in fiber and high **or** low in carbohydrates. Fruits, starchy vegetables, and grains are both high in fiber and high in carbohydrates, because they also contain starches and/or sugars. Some foods, like nuts and nonstarchy vegetables, are high in fiber, but low in carbohydrates. These foods have very little starch or sugars.

Examples of high fiber foods are:

- **Fruits** such as blueberries, raspberries, strawberries, pears, apples with the skin on, prunes, and raisins.
- **Unsalted nuts and seeds**, such as almonds, peanuts, pecans, and walnuts; and pumpkin, sunflower, flax, and chia seeds.
- **Vegetables** such as green peas, broccoli, sweet potatoes, winter squash, and pumpkin.
- **Whole grain foods** such as brown rice, whole-grain bread and rolls, whole-grain pastas, wheat bran, and bran cereals.

- **Beans, peas, and lentils**, such as pinto beans, black beans, black-eyed peas, and soybeans.

Incorporating Carbohydrates Into Your Diet

Choose nutritious carbohydrates that are rich in nutrients—like vitamins, minerals, and fiber—and low in added sugars and salt. Examples include:

- bright and deeply colored fruits and vegetables, like sweet potatoes, beets, and carrots
- whole grains
- beans and peas
- nonfat and low-fat dairy products—like milk and yogurt—or fortified dairy alternatives

Limit foods with added sugars. Added sugars are listed on the nutrition facts panel under total carbohydrates.

Get Your Fiber

- Aim for at least 25–38 g of fiber daily.
- Use the nutrition label to choose foods that have at least 2–3 g of fiber per serving.

Fiber is essential for gut health, protects our heart, and can help manage blood glucose. Fiber is found in plant foods, including both starchy and nonstarchy vegetables, fruits, and grains. Lower-carbohydrate sources of fiber also include peanuts, tree nuts—like almonds, pecans, and walnuts—and seeds like pumpkin, chia, flax, and sunflower.

Carbohydrate Counting

Your doctor or dietitian may suggest you count your carbohydrates so you can be sure of how much you are eating and how foods with carbohydrates affect your blood sugar. Each person has different needs, and how your body responds to foods and beverages can change over time.

Your doctor or registered dietitian will provide individualized carbohydrate recommendations that consider your age, diabetes status, other health conditions, how long you have had diabetes, and other personal factors. Keep your follow-up appointments and contact your healthcare provider if you experience unexpected changes in your blood sugar.

General recommendations when carbohydrate counting:

- When carbohydrate counting, one "carbohydrate choice" is equal to 15 g of carbohydrate.
- General carbohydrate recommendations per meal are 45–75 g per meal; some active individuals may need more. See your physician or registered dietitian for individualized

carbohydrate recommendations.

- Find carbohydrate grams on nutrition labels, food composition apps/books, and diabetes exchange books (and see our general guide below).
- Weigh or measure all your food at first to become familiar with portion sizes.
- Keep food and blood glucose records to see the effect of different carbohydrate foods on blood glucose. This can help you monitor how your body responds to different foods.
- Don't forget to record drinks, including alcohol.
- Eat about the same number of carbohydrates at most meals.

Here are some general carbohydrate-content guidelines:

- 15 g of carbohydrates = 1/3 cup cooked pasta, 1 small slice of bread, 1 small apple, or 1/3 cup beans
- 5 g of carbohydrates = 1/2 cup cooked broccoli, 1 cup raw mixed greens, 1 cup raw chopped or sliced tomato, or 1/2 cup cooked summer squash
- 12 g of carbohydrates = 8 oz milk or 6–8 oz plain yogurt
- 0 g of carbohydrates = 1 medium egg or 3 oz of chicken or beef

References

American Diabetes Association Professional Practice Committee. (2024). Facilitating positive health behaviors and well-being to improve health outcomes: Standards of care in diabetes. *Diabetes Care*, 47(Supplement_1), S77–S110. <https://doi.org/10.2337/dc24-S005>

Evert, A. B., Dennison, M., Gardner, C. D., Garvey, W. T., Lau, K. H. K., MacLeod, J., Mitri, J., Pereira, R. F., Rawlings, K., Robinson, S., Saslow, L., Uelmen, S., Urbanski, P. B., & Yancy Jr., W. S. (2019). Nutrition therapy for adults with diabetes or prediabetes: A consensus report. *Diabetes Care*, 42(5), 731–754. <https://doi.org/10.2337/dci19-0014>