Foods contain 3 types of nutrients: carbohydrate, protein, and fat. These nutrients provide the calories, or energy, that your body uses for fuel.

How many calories you need each day depends mostly on how active you are and whether you need to lose, gain, or maintain your weight.

**Carbohydrates**

Carbohydrates are your main source of energy. Your body breaks down the carbohydrates in your food and makes glucose for your cells to use.

The amount of carbohydrates in a meal or snack affects how much your blood glucose level goes up after you eat. You can check your blood glucose level before and/or after you eat to see how foods affect your blood glucose level.

**Types of Carbohydrate**

*Starches* and *sugars* are the 2 main types of carbohydrate. The most common forms of sugar are:

- Table sugar (*sucrose*)
- Fruit sugar (*fructose*)
- Milk sugar (*lactose*)

The body breaks down starches and sugars into glucose at about the same rate. Most of the starches and sugars you eat (90% to 100%) appears as glucose in your bloodstream 5 minutes to 3 hours after you eat.

Counting **all** the carbohydrates ("carbs") you eat, not just table sugar, is called **carb counting**. Many people with diabetes use carb counting to plan their meals and snacks.
Fiber

The 3rd type of carbohydrate is fiber. Whole (unprocessed) foods are a good source of fiber. Fiber is the part of vegetables, fruits, grains, nuts, and legumes that cannot be fully digested. Fiber adds “bulk” to your meals and can help make you feel full. Some research shows that high-fiber foods may slow the rise in blood glucose after eating.

Eating high-fiber foods:

• Can help to improve blood glucose control and blood fats (lipids)
• Can lower your risk of heart disease and some types of cancer
• Can help prevent or relieve constipation

Carbohydrate Sources

• Grains such as bread, pasta, rice, cereals, and crackers
• Fruit and fruit juice
• Dairy such as milk and yogurt
• Vegetables such as broccoli, green beans, carrots, and potatoes
• Sugars

How are carbs measured?

In carb counting, 1 carb choice equals 15 grams carbohydrate. For example:

• 1 small apple = 1 carb choice = 15 grams carb
• 2 slices of bread = 2 carb choices = 30 grams carb
• 1 cup of rice or pasta = 3 carb choices = 45 grams carb

How many carbohydrate choices are right for me?

The table below gives examples of carbohydrate choices for men and women, based on whether they want to lose weight or maintain their weight. These suggestions are only a general guide.

If the number of choices does not seem like enough to fill you up, a good place to start may be eating a little less than you are now.

<table>
<thead>
<tr>
<th></th>
<th>To Lose Weight</th>
<th>To Maintain Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>Eat 2 to 3 carb choices at each meal (30 to 45 grams)</td>
<td>Eat 3 to 4 carb choices at each meal (45 to 60 grams)</td>
</tr>
<tr>
<td>Men</td>
<td>Eat 3 to 4 carb choices at each meal (45 to 60 grams)</td>
<td>Eat 4 to 5 carb choices at each meal (60 to 75 grams)</td>
</tr>
</tbody>
</table>
If you are taking insulin to control your blood glucose level, you may need a different meal plan. Talk with your diabetes care provider about what will work best for your needs.

**Protein**

Your body uses protein to build tissue and repair injuries. Protein foods can also provide energy for your body if you don’t eat enough carbohydrates. Protein foods do not greatly affect your blood glucose level.

**Protein Sources**

- Meats, fish, poultry, and eggs
- Dairy such as cheese, milk, yogurt, and cottage cheese
- Peanuts and peanut butter, dried beans and peas, legumes, and soy products such as tofu
- Nuts and seeds such as almonds and walnuts

**Fat**

You need to eat some fat with every meal to absorb certain vitamins and minerals. Your body also uses fat for energy.

Follow the guidelines below about eating fats. Too much fat can cause weight gain and raise the level of your blood fats (lipids).

There are 3 main types of fat found in food:

- **Unsaturated fats**: These are the healthiest types of fat. They contain vital nutrients. Eat these in moderation:
  - *Monounsaturated fats*: olives, olive oil, canola oil, nuts, avocados, peanuts, and peanut oil
  - *Polyunsaturated fats*: corn, safflower, sunflower, and soybean oils
  - *Omega-3 fatty acids* (a type of polyunsaturated fat): fish, flax seeds, chia seeds, and walnuts

- **Saturated fats**: Eat these fats in very small amounts:
  - Fatty meats, whole milk, and cheese
  - Butter, shortening, hydrogenated fats, and tropical oils (palm, palm kernel, and coconut oils)

- **Trans fats**: Avoid eating these fats:
  - Processed foods: snack foods, cookies, and fast foods
  - Most stick or solid margarines
Tips for Planning Your Meals

- Find out how many carbohydrate foods you usually eat in a day. Use a sampling of about 3 breakfasts, 5 lunches, and 7 to 10 dinners. In a couple of weeks, you will have a good idea of how much carbohydrate you are eating at most of your meals. This information, along with results of your blood glucose monitoring, will help you know if your meal plan is working for you.

- Try to eat at regular times. Most people with diabetes do well with an eating plan that includes 3 meals a day.

- Include a snack in your eating plan if you are hungry or your meal is going to be delayed. But, eating snacks if you are not hungry just adds calories you don’t need.

- Practice measuring or weighing your carbohydrate foods to learn the right portion size for you.

- Read food labels to check the **Total Carbohydrate** content in grams per serving:
  - Put your portion of food on a plate or in a bowl. If it is a beverage, pour it into a glass.
  - Next, use measuring cups or spoons to measure exactly how much you are eating or drinking.
  - Now, look at the serving size listed on the Nutrition Facts label.
  - Then, calculate the total carbohydrate of the amount of the food you are actually eating.

- Do not eat all of your day’s carbohydrates in 1 meal or snack. Instead, eat smaller amounts at each meal.

- Eat whole (unprocessed) foods such as fresh fruits, vegetables, and whole grains more often than processed and ready-to eat-foods. Whole foods are good sources of fiber.

- Choose leaner protein sources such as grilled chicken, turkey, fish, or low-fat milk products, as well as vegetable proteins such as beans and lentils.

- Drink water when you are thirsty, instead of juice or sugar-sweetened drinks such as soda pop, energy drinks, and sweet teas.