

## Carbohydrates

### Not all carbs are created equal

Food contains three types of carbohydrates: sugar, starches and fiber. Carbohydrates are either called simple or complex, depending on the food's chemical structure and how quickly the sugar is digested and absorbed. The type of carbohydrates that you eat makes a difference – Foods that contain high amounts of simple sugars raise triglyceride levels. High triglyceride (or blood fats) levels are associated with coronary heart disease, diabetes and fatty liver.

- Simple carbohydrates are digested quickly and send immediate bursts of glucose (energy) into the blood stream. That's why you may feel a rush of energy when you eat a dessert, only to be followed by a crash of fatigue when that sudden burst of energy is depleted. Simple sugars are found in refined sugars, like the white sugar you'd find in a sugar bowl. Added sugars (including refined sugars) provide calories, but lack vitamins, minerals and fiber and can lead to weight gain.

### Not all simple sugars are alike

There are also simple sugars in more nutritious foods, like fruit and milk. These are naturally occurring and, unlike refined sugars, these sugars often come with vitamins, minerals and fiber.

- Complex carbohydrates are digested more slowly and supply a lower more steady release of glucose into the blood stream.

Refined grains, such as white flour and white rice, have been processed, which removes many nutrients and fiber. Many foods containing refined grains like white flour, sugar and white rice lack B vitamins and other important nutrients unless they're marked "enriched." By contrast, unrefined whole grains retain many of these vital nutrients and are rich in fiber, which helps your digestive system work well. Fiber helps you feel full, so you are less likely to overeat these foods.



## Why do I need carbohydrates?

When you eat carbs, your body breaks them down into simple sugars, which are absorbed into the bloodstream. As the sugar level rises in your body, the pancreas releases a hormone called insulin. Insulin is needed to move sugar from the blood into the cells, where the sugar can be used as a source of energy.

When this process goes fast — as with simple sugars like sugar-sweetened beverages and high calorie desserts — you're more likely to feel hungry again soon.

When it occurs more slowly, as with a whole-grain food, you'll feel satisfied longer because it takes longer for your body to break down the complex carbohydrates in whole grains into simple sugars. These types of complex carbohydrates give you energy over a longer period of time.

How fast or slow carbohydrates are turned into blood glucose are measured on the glycemic index. If you're healthy, carbohydrates turn into glucose (blood sugar), which your body uses for energy. But if your blood glucose levels become too high or too low, it could be a sign that your body can have trouble producing the insulin that it needs to stay healthy which can eventually result in diabetes.

Simple carbohydrates found in processed, refined or added sugars that do not contain any nutritional value include:

- Candy
- Regular (non-diet) carbonated beverages, such as soda
- Syrups
- Table sugar
- Added sugar

Complex carbohydrates, often referred to as “starchy” foods, include:

- Legumes
- Starchy vegetables
- Whole grain and fiber

It is important to try to eat natural sugars. For example, enjoy fruit instead of a soft drink and aim for whole grains instead of processed flours

So when it comes to carbohydrates follow these recommendations:

1. **Limit foods** that are high in processed, refined simple sugars provide calories but they have very little nutrition.
2. **Get more complex carbohydrates** and healthy nutrients by eating more fruits and vegetables.
3. **Focus on whole-grain** rice, breads and cereals, and don't forget the legumes — beans, lentils and dried peas.

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