

Glycemic Index and Diabetes

Glycemic index, or GI, is a system of ranking foods that measures how a carbohydrate-containing food raises blood glucose. Foods are ranked based on how they compare to a reference food—either glucose or white bread. A food with a high GI raises blood glucose more than a food with a medium or low GI.

Meal planning while using GI means choosing foods that have a low or medium GI. If you are eating a food with a high GI, you can combine it with other low GI foods to help balance the meal. Examples of carbohydrate-containing foods with a low GI include dried beans and legumes such as kidney beans and lentils, all non-starchy vegetables, some starchy vegetables, most fruit and some grains like quinoa. Meats and fats do not have a GI because they do not contain carbohydrates.

What affects the GI of a food?

Fat and fiber tend to lower the GI of a food. As a general rule, the more a food is cooked or processed, the higher its GI. However, it should be noted that this is not always the case.

A few other examples of factors that can affect the GI of food include:

- **Ripeness and storage time** — the more ripe a fruit or vegetable is, the higher the GI.
- **Processing** — juice has a higher GI than whole fruit; mashed potato has a higher GI than a whole baked potato, stone ground whole wheat bread has a lower GI than whole wheat bread.
- **Cooking method** — how long a food is cooked (for example, al dente pasta has a lower GI than soft-cooked pasta)
- **Variety** — converted long-grain white rice has a lower GI than brown rice but short-grain white rice has a higher GI than brown rice.

Important Factors to Keep in Mind

When using the GI, it is important to balance GI guidelines with basic nutrition principles. A diet including a variety of healthy foods with a moderation of foods with fewer nutrients is still essential.

For example, the GI value represents the type of carbohydrate in a food but says nothing about the amount of carbohydrate typically eaten. Portion sizes are still relevant for managing blood glucose and for losing or maintaining weight.

Additionally, the GI of a food is different when eaten alone than it is when combined with other foods. When eating a high GI food, you can combine it with other low GI foods to balance out the effect on blood glucose levels.

Is the GI a better tool than carbohydrate counting?

Based on research, the first tool for managing blood glucose for most people with diabetes is some type of carbohydrate counting. Balancing total carbohydrate intake with physical activity and diabetes pills or insulin is key to managing blood glucose levels.

Combined with carbohydrate counting, the GI may provide an additional benefit for achieving blood glucose goals for individuals who can and want to put extra effort into monitoring their food choices. For individuals, using the GI may be helpful in fine-tuning blood glucose management.

Keep in mind that there is no one diet or meal plan that works for everyone with diabetes. Try to follow a meal plan that is tailored to personal preferences and lifestyle and helps achieve goals for blood glucose, cholesterol and triglycerides levels, blood pressure, and weight management.

For more information on carbohydrate counting, visit <https://www.diabetes.org/nutrition/understanding-carbs/carb-counting>

The GI of Specific Foods

The GI is a ranking of foods based on how quickly they raise blood glucose levels. The reference foods, white bread or glucose, have a GI of 100.

Low GI Foods (55 or less)

- 100% stone-ground whole wheat or pumpernickel bread
- Oatmeal (rolled or steel-cut), oat bran, muesli
- Pasta, converted rice, barley, bulgar
- Sweet potato, corn, yam, lima/butter beans, peas, legumes and lentils
- Most fruits, non-starchy vegetables and carrots

Medium GI (56-69)

- Whole wheat, rye and pita bread
- Quick oats
- Brown, wild or basmati rice, couscous

High GI (70 or more)

- White bread or bagel
- Corn flakes, puffed rice, bran flakes, instant oatmeal
- Shortgrain white rice, rice pasta, macaroni and cheese from mix
- Russet potato, pumpkin
- Pretzels, rice cakes, popcorn, saltine crackers
- Melons and pineapple

Resources

- American Diabetic Association: www.diabetes.org

Here when you need us.

Call: 844-207-5465

Online: guidanceresources.com

App: GuidanceNowSM

Web ID: LivingME

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