

The Lowdown on Glycemic Index

The glycemic index is one tool of several that can help you make better carbohydrate choices.

The Nutrition Facts label lists the grams of carbohydrate in foods. However, that doesn't really tell you how these carbs might affect your blood sugar (glucose) levels. A better gauge of this is the glycemic index (GI). It was introduced about 35 years ago, and scientific support for GI continues to grow.

What is GI? "It's a scale of 0 to 100 that ranks how the carbohydrate in foods affects blood sugar levels," says Jennie Brand-Miller, PhD, a nutrition professor at the University of Sydney and co-author of many scientific studies and books on GI. Glycemic load (GL), a similar measure, also considers how much you're eating: Portion size still counts.

The higher the GI of a food, the more quickly it's digested and absorbed, so your blood sugar may spike after eating high GI foods and then drop markedly, which may cause your energy levels to dip, too. In contrast, low GI foods are digested and absorbed slowly, causing a gentler rise in blood sugar (see "Impact of GI on Blood Glucose"). Low GI foods also tend to keep you full longer.

GI is used for carbohydrate, which is found in foods such as baked goods, cereal, rice, pasta, fruits, vegetables (more so if starchy), milk, yogurt, legumes, desserts, caloric beverages, and most nuts. Meat, cheese, eggs, and oils contain virtually no carbohydrate and don't have a GI. A GI of 55 or less

is low; 56–69 is medium; 70 or more is high. Look up GI values at glycemicindex.com or buy a book with GI listings.

The precise glycemic (blood sugar) response to a food varies substantially from person to person and even within the same person from day to day, as pointed out by a new study in the September 2016 issue of the *American Journal of Clinical Nutrition*. Regardless, the GI—which represents the average glycemic response to a food based on standardized testing in at least 10 people—is still helpful in identifying foods that are likely to affect blood sugar more than others, says Tom Wolever, MD, PhD, a leading GI researcher at the University of Toronto.

A GI of 55 or less is low; 56–69 is medium; 70 or more is high. Look up GI values at glycemicindex.com.

Why It's Important. "GI is relevant to everyone because the average GI of your diet predicts your risk of developing type 2 diabetes and heart disease over time," Brand-Miller says. Diets low in GI and GL can help in the prevention and management of diabetes and heart disease, and probably obesity, too, concluded the International Carbohydrate Quality Consortium, a 20-member group of experts, including Brand-Miller and Wolever (*Nutrition, Metabolism & Cardiovascular Diseases*, September 2015). Emerging research



Whole fruits and vegetables are examples of low GI foods

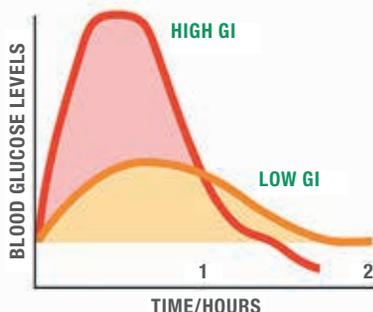
suggests eating a lower GI diet may also help with acne, mental performance, mood, pregnancy outcomes, polycystic ovarian syndrome (PCOS), and risk of certain cancers.

How could GI affect such a wide range of health concerns? One big reason is that following a low GI eating plan can help reduce inflammation, which is an underlying factor in many health conditions. "The spike in blood sugar after eating stimulates an inflammatory response in cells," Wolever says. "If you can smooth out and reduce blood sugar fluctuations, you reduce oxidative stress (tissue damage) and inflammation."

The Bottom Line. "GI is not the only factor you should consider when making carbohydrate choices," Wolever says. You also should look at fiber and whole grain content, as well as how highly processed the food is. A high GI doesn't automatically make a food bad for you, nor does a low GI automatically make a food good for you; it's still important to follow a healthy eating plan overall. 

—Marsha McCulloch, MS, RD

Impact of GI on Blood Glucose



High GI foods cause blood sugar to spike and then crash (see the red line on the graph). Low GI foods release glucose at a slower, more sustainable rate (see the yellow line), promoting steadier blood sugar.

Reprinted with permission of the Glycemic Index Foundation, gisymbol.com.

Practical GI Tips

- **Enjoy whole fruits and vegetables.** Most fresh fruits are low GI. Many non-starchy vegetables, such as asparagus and broccoli, do not even have a GI because they're so low in carbs.
- **Get soluble fiber.** It's viscous (gummy) and contributes to the low GI of foods. Some good sources are barley, oats, chia seeds, and legumes.
- **Opt for minimally processed whole grains.** For example, plain instant oatmeal (made with water) has a GI of 83; oatmeal from whole rolled oats has a GI of 58.
- **Enjoy potatoes cold,** for example, in salad. For instance, red potatoes boiled for 12 minutes have a GI of 89; after refrigerating overnight, the GI is 56.
- **Cook pasta al dente (firm to the bite).** Firm pasta has a lower GI than pasta cooked until soft.
- **Add acidic ingredients,** such as yogurt, vinegar, or lemon juice. For example, mix low-fat plain yogurt (GI 35) with shredded wheat cereal (GI 83).
- **Enjoy balanced meals.** Eating carbohydrate-rich foods along with protein and a bit of fat helps moderate the body's overall blood sugar response.