

# What is the Glycemic Index (GI)?

The glycemic index ranks foods on how they affect our blood sugar levels. This index measures how much your blood sugar increases in the two or three hours after eating.

The glycemic index is about foods high in carbohydrates. Foods high in fat or protein don't cause your blood sugar level to rise much.

A lot of people still think that it is plain table sugar that people with diabetes need to avoid. The experts used to say that, but the glycemic index shows that even complex carbohydrates, like baked potatoes, can be even worse.

When you make use of the glycemic index to prepare healthy meals, it helps to keep your blood sugar levels under control. This is especially important for people with diabetes, although athletes and people who are overweight also stand to benefit from knowing about this relatively new concept in good nutrition.

Recent studies of large numbers of people with diabetes show that those who keep their blood sugar under tight control best avoid the complications that this disease can lead to. The experts agree that what works best for people with diabetes – and probably the rest of us as well – is regular exercise, little saturated fat, and a high-fibre diet. That is excellent advice – as far as it goes.

The real problem is carbohydrates. The official consensus remains that a high-carbohydrate diet is best for people with diabetes. However, some of the experts, led by endocrinologists like Dr. Richard K. Bernstein, recommend a low-carbohydrate diet, because carbohydrates break down quickly during digestion and can raise blood sugar to dangerous levels.

Many high-carbohydrate foods have high glycemic indexes, and certainly are not any good in any substantial quantity for people with diabetes. Other carbohydrates break down more slowly, releasing glucose gradually into our blood streams and are said to have lower glycemic indexes. Does a substantial quantity of these foods with lower glycemic indexes belong in your diet? Only your personal experience can answer that question.

Before the development of the glycemic index beginning in 1981, scientists assumed that our bodies absorbed and digested simple sugars quickly, producing rapid increases in our blood sugar level. This was the basis of the advice to avoid sugar, a proscription recently relaxed by the American Diabetes Association and others.

Now we know that simple sugars don't make your blood sugar rise any more rapidly than some complex carbohydrates do. Of course, simple sugars are simply empty calories, and still should be minimized for that reason.

Many of the glycemic index results have been surprises. For example, baked potatoes have a glycemic index considerably higher than that of table sugar.

Scientists have so far measured the glycemic indexes of about 300 high-carbohydrate foods. The key is to eat little of those foods with a high glycemic index and more of those foods with a low index.

The GI is especially useful to diabetics who want to plan their diets to minimize the incidence of high blood sugar, or spikes. It measures how fast the carbohydrate of a particular food is converted to glucose and enters the bloodstream. The lower the number the slower the action.

The numbers are percentages with respect to a reference food. They are given here with respect to white bread. In other words, on the scale white bread equals 100, which is what is generally used in the United States. Multiply the GI on this scale by 0.7 to convert to the value on the scale where glucose = 100.