



# Sugar Sense

Why the glycemic index should be a part of your nutrition vocabulary

In the '80s and '90s the nutrition news was all about fat; more specifically, why we need to eat less of it. Now the attention has focused on carbohydrates. And with government estimates indicating that one out of three children born today will develop diabetes, it's important that we understand how our bodies react to carbohydrates.

The glycemic index (GI) is a relative scale of the ability of specific types of carbohydrates to raise blood glucose (sugar) levels. When glucose enters the bloodstream, the pancreas secretes the hormone insulin. Insulin's main function is to facilitate the transport of glucose into the cells for energy, storage and maintenance. Insulin also favors the transport of other nutrients into the cells, such as vitamins, minerals, amino acids and fatty acids. At any given time, the amount of insulin produced is directly proportional to the amount of glucose present.

The GI simply measures how fast the carbohydrate of a particular food is converted to glucose and enters the bloodstream. The glycemic index is compiled by feeding foods to various individuals and studying their blood glucose response for the following three hours. The response to the reference food is tested at least three times and the results averaged. The results of this testing have enabled researchers to

develop glycemic index charts of various foods.

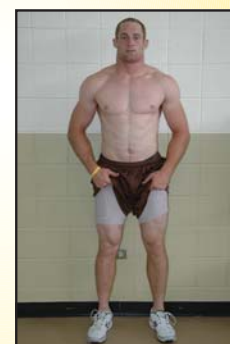
Generally, a food that has a GI rating below 60 is considered low and one that is above 70 is considered high. Although the GI ratings of various brands of food vary, here is a list of a few foods and drinks and their generally assessed GI ratings: beer, 110; rice cakes, 82; Rice Krispies, 82; white rice, 72; soft drinks, 68; ice cream, 61; oatmeal, 61; bran muffin, 60; baked beans, 48; green peas, 48; apple, 39; yogurt, 36; carrots, 92; peanuts, 14.

It is a federal offense to print incorrect GI information on a food label, such as claiming that a product is low glycemic when it is actually high glycemic – such an error could cause serious physical responses in diabetics. One book written for the lay public that lists the GI of hundreds of foods is *The New Glucose Revolution Complete Guide to Glycemic Index Values*, by Jennie Brand-Miller et al. (Marlowe & Company, 2003).

Foods that have a higher fiber, protein or fat content will usually have a lower glycemic index. That is because fiber, protein and fat slow the uptake of sugar into the bloodstream. High GI foods, on the other hand, will be broken down into glucose faster and there-

BEFORE

AFTER



As these before-and-after photos will attest, if there was ever an example of the results of proper diet and training, it's University of Wyoming's John Wendling. A safety, Wendling stands 6 feet 1 inch, weighs 222 pounds (all muscle!), has run a 4.38 forty and has a vertical jump of 40.9 inches. Amazing!

fore enter the bloodstream faster, hence causing more insulin to be produced.

This rapid rise of insulin causes too much glucose to be taken up by the cells, which results in reactive hypoglycemia (low blood sugar) and in turn stimulates the appetite. The greater quantity of food will overload the digestive system, resulting in poorly digested food and weight gain. There is even research to suggest that high GI diets may be linked to cancer and other serious medical conditions.

Perhaps nutrition reporting today has gone overboard with its focus on carbohydrates. But the fact is, those who ignore the glycemic index when making food choices suffer consequences that are anything but sweet. **ERS**

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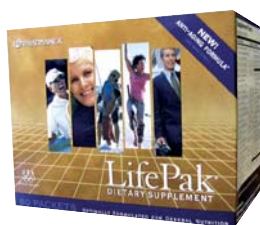


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