



THE PLAIN DEALER

Weigh all information before relying on glycemic index

Wednesday, July 12, 2006

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I've been trying to follow a low glycemic index diet, since I've heard that will help me lose weight and avoid diabetes. But when I check different sources on the GI of foods, the numbers don't always match. And then I heard that a study suggests GI isn't helpful for dieters. Help!

The glycemic index measures how much a person's blood sugar changes after eating carbohydrates - pasta, fruit or cereal, for example.

Some carbohydrates cause more of a response than others, weight for weight, serving for serving. The higher and more prolonged the curve, the higher the glycemic index.

The glycemic index of glucose (a simple source of sugar) is 100; other foods are ranked in comparison. So if apple juice has a GI of 40, it raises blood sugar only 40 percent as much as glucose.

High GI foods such as potatoes, baguettes and cornflakes have an index greater than 70.

Low GI foods such as kidney beans, some whole grain breads and muesli have an index less than 55.

With me so far?

Some epidemiological studies - for example, the Nurses Health Study - have suggested that high GI diets are associated with an increased risk for diabetes, heart disease, and obesity. Diet book authors have taken the concept to heart. The GI figures significantly in such diet programs as "Sugar Busters," "Dr. Bob Arnott's Revolutionary Weight Control Program," "Eat Yourself Slim," "The South Beach Diet" and "Glycemic Index Diet."

NutriSystem based its Nourish weight loss program on the concept. Some athletes are using high GI foods to replenish muscle glycogen after an event or low GI foods in pregame meals to stabilize blood sugar for endurance events.

Dieters of all kinds have downloaded tables of GI values. And immediately, they've gone crazy.

Why?

1. The glycemic index takes into account only the type of carbohydrate, not the amount of carbohydrate, in a usual serving. Some foods are more concentrated sources of carbohydrates than others. For example, chocolate cake has 52 grams of carbohydrate in a usual serving, while carrots deliver only 6 grams of carbohydrate in a serving. So even though the glycemic index of carrots is higher (47, vs. 38 for cake) chocolate cake is going to have a much greater total effect on blood sugar, because it takes 8½ servings of carrots to equal the carbohydrate in a serving of cake.

2. The GI in a given food can vary, depending on where it is grown and how it is processed and cooked. Australian potatoes have a higher GI than American potatoes. In general, the more processed the food, the higher the GI.

Even cooking pasta for a longer time can raise the GI.

3. Generally, whole grains have a lower GI than refined grains. But glycemic index rankings are often confusing:

Bran flakes and Cheerios have a GI of 74. Shredded wheat is 75, and Fruit Loops, 69.

Long-grain white rice averaged 56 in 10 studies (it ranges between 41 and 64), while brown rice averaged 55 (50-66).

The average GI of white bread in six studies was 70 and of whole grain bread was 71.

And, ironically, sugars have a lower GI than starches, because starches are made up totally of glucose molecules, and sugars are not. So Coca-Cola has a lower GI than Grape-nuts flakes.

4. Studies that establish the GI of foods measure the response to a food consumed all by itself. But most of us don't eat like that. What's important is predicting the effect of the food as part of a meal.

Experts disagree on the value of the glycemic index.

The American Diabetes Association says that "the relationship between glycemic index and glycemic load and the development of type 2 diabetes remains unclear at this time." The Canadian and Australian Diabetes Associations have endorsed GI as a tool for improved blood glucose control. Some dietitians who work with people with diabetes recommend that their clients address other diet issues first, such as total carbohydrate and meal spacing, then try the GI concept to see if that improves blood sugars further.

"There's no doubt that different foods produce different glucose responses," says Marion Franz, a registered dietitian and nutrition consultant who authored a "Hot Topics" paper on glycemic index for the American Dietetic Association. "But the total carbohydrate has much more of an effect than the GI. Some studies have shown a link between high GI and disease risk, but five others did not."

A study published in the British Journal of Nutrition found no association between high GI eating habits and elevated blood sugar in more than 800 adults followed for more than five years.

For the general public, a better approach is to eat close to the farm. Avoid highly refined foods and focus on lean meats, beans and legumes, whole grains and fresh fruits and vegetables.

The bottom line? Applying GI to real-life diets is complex, and the research is conflicting. Even dietitians are reluctant to tackle it, and we're into that sort of thing. And right now, there's no compelling evidence that it works.

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