HOT TOPIC: Glycemic Index

CLAIM OF TOPIC: Glycemic Index can help control appetite, weight, diabetes and other health concerns.

DISCUSSION OF TOPIC:

Even though it's been around for a number of years, the Glycemic Index has recently gained attention as a possible tool for controlling appetite and managing weight and blood glucose levels. The Glycemic Index has remained a controversial subject since its development over 20 years ago.

The Glycemic Index, or GI, ranks carbohydrate foods based on how they affect the body's blood glucose level. Individual foods are compared to white bread or glucose. High GI foods produce a greater increase in blood glucose levels than low GI foods. Examples of high GI foods are white bread, crackers and corn flakes, while low GI foods include nonstarchy vegetables, most fruits, dairy products, beans and sugars.

The GI does not measure how rapidly blood glucose levels increase as is claimed by some popular diet books. Research has found that blood glucose levels peak at about the same time regardless of the carbohydrate source. Also, the body's insulin response to a specific food is not directly related to the carbohydrate content of the food or the GI value.

The major appeal of grouping food by GI is the potential for making meal planning easier, especially for people with diabetes. But, it's not that simple. Here's why:

- A food can have different GI values as a result of how ripe it is, its variety, how it is cooked and how it has been processed, and from country to country.
- The GI of a food varies significantly from person to person. For some individuals, it can even vary from day to day.
- The GI of a food eaten alone is different than when it is eaten with another food. For example, if a high GI food is eaten in combination with a low GI food, the GI response is moderate.
- Standard test portions of foods used for determining GI are not the usual portion sizes that individuals consume.
- The GI is not a reliable guide for healthy food choices. Although many healthy foods have a low GI, there are also foods of questionable nutritional value with low or moderate GI values such as soft drinks, candies, sugars and high fat foods.

Bottom Line: At this time, research does not support the claim that a low GI diet causes significant weight loss or helps control appetite. For people with diabetes, monitoring total grams of carbohydrate remains the key strategy. However, some individuals with diabetes may be able to use the GI concept, along with blood glucose monitoring, to "fine-tune" their food choices to produce a modest improvement in postmeal blood glucose levels.

Opportunities for Dietetics Professionals: Dietetic professionals can use information on the GI to update clients, the public, and other health care professions with the pros and cons regarding use of the GI.

References:

1. Raatz SK, Torkelson CJ, Redmon JB, Reck KP, Kwong CA, Swanson JE, Liu C, Thomas W, Bantle. Reduced glycemic index and glycemic load diets do not increase the effects of energy restriction on weight loss and insulin sensitivity in obese men and women. *J Nutr* 2005;135:2387-2391.
2. Franz MJ. Glycemic index. Not the most effective nutrition therapy intervention. *Diabetes Care* 2003; 26:2466-2468.

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