WHAT IS THE GLYCEMIC INDEX & GLYCEMIC LOAD?

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The glycemic index is a rating system developed to measure food's effects on blood sugar levels. Glucose was set at 100, and all other foods were measured accordingly. The higher the glycemic index, the more pronounced an effect a food will have on your blood sugar, and the more stressful to your insulin system. Remember these rules about food and its effects on insulin:

• Carbohydrates - starches and sugars - have the greatest effect. This is especially true if they have little fat or fiber with them.

• Fat has a glycemic effect of zero. Taken with carbohydrates, fat actually blunts the glycemic index. So while a plain baked potato has a high glycemic index, a potato with butter would have a lower one.

• Protein usually has a glycemic effect, but remember that because protein can be readily turned into blood sugar in the liver (via gluconeogenesis), it can raise insulin and blood sugar levels moderately, but usually in a healthy, even way.

Low glycemic index carbohydrates are desirable for weight loss, diabetic control, and for keeping HDL cholesterol high. Recent research suggests that it is the high glycemic index carbohydrates that are the ones that lower HDL cholesterol (this would be a bad effect).

Remember that meals are composed of many foods, and it is hard to know what the overall glycemic effect of a given meal will be. But using foods that are lower on the glycemic index will benefit diabetics, those who want to lose weight, as well as those who want to raise their HDL cholesterol.

The glycemic index remains controversial. Some claim it has no clinical significance, while others have written entire books recommending we eat according to this rating system. The important thing to remember is this is just one tool for understanding nutrition and is not the end all. For example, fructose is low on the GI scale yet we know it is the most atherogenic of all sugars and can also lead to insulin resistance. Milk also has a low GI but can lead to insulin resistance. Not all foods, especially bakery items and milk products, have a GI index that correlates with the rise in insulin(known as the Insulin Index). Overall, the more refined, lower fiber and processed foods generally tend to be higher on the scale. So if there is one clear message from the glycemic index, it is to eat real food.

THE GLYCEMIC INDEX and THE GLYCEMIC LOAD

The Glycemic Index (GI) tells us how a particular carbohydrate affects your body's blood sugar when 50 grams of it is consumed all alone. Generally, the lower the fiber content and the more refined a food is, the higher its glycemic index – i.e. white bread has a higher GI than whole grain bread (unless the whole grain bread is finely ground, which breaks down its fiber).

The challenge is that we don't usually eat foods in isolation nor do we eat 50 grams of a particular food – while we might eat 50 grams of potato – roughly a large serving of mashed potatoes or a giant Idaho spud, it is unlikely that we will eat that much of raw carrots – that would mean eating 1-1/2 lbs. worth. If you eat a carbohydrate with fat, it lowers the GI. SO the better way to look at how carbohydrates affect blood sugar is the Glycemic Load (GL). Recent research reveals that it is the cumulative effect of this GL throughout the day that impacts health the most, not the actual GI of a single meal or snack.

GL is the GI multiplied by the amount of carbohydrates actually being consumed. For example, a carrot has a GI of 131 and 4 grams of carbohydrates so its GL is (1.31 X 4) 5. A mashed potato has a GI of 104 and 37 grams of carbohydrates, so its GL is (1.04 x 37) 38. As with the GI, you are better off striving for lower GL value. This is useful when you are eating a higher GI food so that you understand the importance of consuming it in moderation.

The Glycemic Index

110 MALTOSE (Malt Sugar)
100 GLUCOSE (Grape Sugar)
98 Potato, Russet, Baked
97 Parsnips
92 Carrots
87 Honey
80 Potato, Instant Mashed
80 Corn Flakes
72 Whole Wheat Bread
72 White Rice
70 Potato, White
69 White Bread
68 Mars Bar
67 Shredded Wheat
66 Swiss Museli
66 Brown Rice
64 Raisins
62 Bananas
59 SUCROSE
59 Sweet Corn
59 Pastry
51 Bran
51 Green Peas
51 Potato Chips
51 Sweet Potato
50 White Spaghetti
49 Oatmeal
45 Grapes
42 Whole Grain Rye Bread
42 Whole Wheat Spaghetti
40 Orange
39 Apples
38 Tomatoes
36 Ice Cream
36 Chickpeas
36 Lima Beans
36 Yogurt
34 Pears
34 Milk, Whole
32 Milk, Skim
29 Kidney Beans
29 Lentils
28 Sausages
26 Peaches
26 Grapefruit
25 Plums
23 Cherries
20 FRUCTOSE