Center for Integrative Medicine
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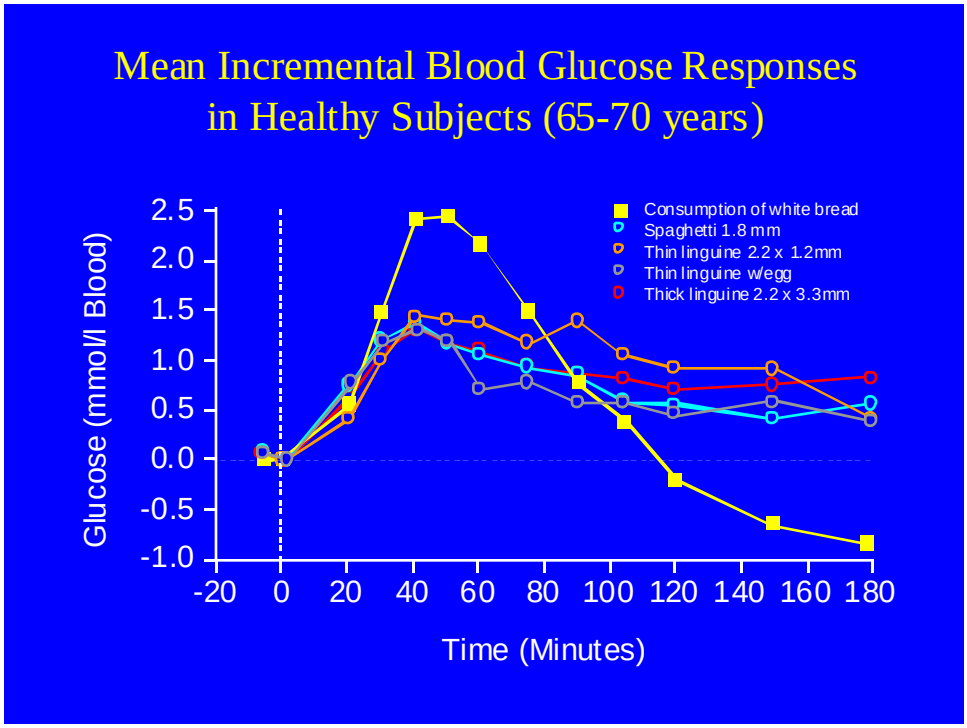
Glycemic Index

How to use the glycemic index
By making careful food choices, you can influence your hunger and energy as well as blood sugar levels, cholesterol and triglyceride levels. If you have problems controlling how much food you eat, have hypoglycemia, diabetes, or high triglyceride and cholesterol levels, considering the glycemic index in your food choices may be helpful.

Blood sugar levels are raised after foods containing carbohydrates (sugars and starches) are eaten. Different carbohydrate-containing foods affect blood sugar levels differently. One of the foods that is often used as a reference is white bread. It has a relatively high glycemic index of 70.



The glycemic index of a food refers to its effect on blood sugar levels. The number is a comparison with a reference food, in this case the sugar, glucose. Glucose is a very basic sugar and not the same as table sugar.

A high glycemic index may be considered to be a number between 70 and 100; medium, between 50 and 70; and low, under 50.

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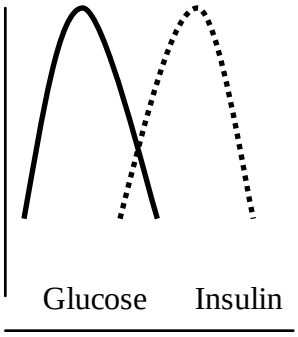
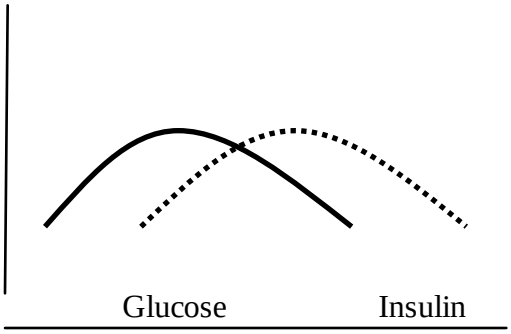
Glycemic Index Reference Range

- High Glycemic Index 70-100
- Moderate Glycemic Index 50-70
- Low Glycemic Index <50

The higher the higher the rise in glucose in the blood stream, the more insulin is produced to store it. Over time this can lead to higher insulin levels that can result in inflammation, weight gain and insulin resistance. The end result can be the progression to type II diabetes.



High Glycemic Index Food



Low Glycemic Index Food

If you think that considering glycemic index in your diet would be helpful, follow these the guidelines.

1. Eat low and medium glycemic index foods like beans, oatmeal, and pasta regularly but in moderate quantity. Eat high glycemic index foods like bread, bagels, English muffins, baked potato, and snack foods rarely and only in very small quantities.

* Use beans as a side dish instead of rice or potatoes, for example ranch beans or lima beans. Use beans as a snack food instead of chips, crackers or rice cakes, for example hummus eaten with raw vegetables.

* Cook pasta to the *al dente* state. Al *dente* translates from Italian as "to the tooth", refers to pasta cooked only until it offers slight resistance when bitten into, not soft or overdone. Serve one cup cooked pasta with at least one cup vegetables and a sauce of your choice.

* Focus on lower glycemic index fruits like apples, pears, berries, and citrus more than higher glycemic index fruits like melon pineapple and raisins.

* If you eat cereal, choose one with a low glycemic index such as All Bran or oatmeal.

* Have sugary foods like candy, soda and other sweetened beverages in small quantities and with a meal.

2. Eat smaller, more frequent meals.

* Try including a snack both mid-morning and mid-afternoon.

* Have a moderate sized lunch. Routinely have smaller dinners, like a salad, bowl of soup, or small portion of fish, chicken or meat and vegetables.

GLYCEMIC INDEX OF COMMON FOODS

Remember that glycemic index can only be measured on foods that contain carbohydrate. Glycemic index values have not been determined on all foods, however more extensive lists can be found in the resources listed below. The reference food for this table is glucose.

FOOD	GLYCEMIC INDEX
BREADS	
Bagel	72
Kaiser roll	73
White bread	70
Whole wheat bread	69
Sourdough bread	52
Whole grain pumpernickel	46
CEREALS	
Corn flakes	83
Rice Krispies	82
Grapenuts flakes	80
Total	76
Cheerios	74

Puffed wheat	74
Shredded wheat	69
Grapenuts	67
Cream of wheat	66
Oatmeal	61
Special K	54
All bran	42
GRAINS	
Instant rice	87
Millet	71
White rice	56
Brown rice	55
Bulgur	48
Converted rice	47
Barley	25
SNACKS	
Rice cakes	82
Jelly beans	80
Soda crackers	74
Corn chips	72
Chocolate bar	68
Rye crisp bread	63
Power Bar	57
Popcorn	55
Potato chips	54
Peanuts	14
PASTA	
Spaghetti	41
Whole wheat spaghetti	37
BEANS	
Baked beans	48
Chickpeas	33
Cooked beans	29
Lentils	29
Soy beans	18
VEGETABLES	
Baked potato	85
Beats	64
New potato	62
Sweet corn	55
Sweet potato	54
Carrots	49
Green peas	48
FRUIT	
Watermelon	72
Pineapple	66
Raisins	64
Mango	55

Orange juice	52
Canned peach	47
Orange	43
Unsweetened apple juice	41
Apple	36
Pear	36
Peach	28
Grapefruit	25
MILK AND YOGURT	
Chocolate milk	34
Low fat fruit yogurt	33
Skim milk	32
Whole milk	27
SUGARS	
Glucose	100
Honey	58
Sucrose (table sugar)	65
Fructose	43

Glycemic Load

> The glycemic load (GL) is a relatively new way to assess the impact of carbohydrate consumption that takes the glycemic index into account, but gives a fuller picture than does glycemic index alone. A GI value tells you only how rapidly a particular carbohydrate turns into sugar. It doesn't tell you how much of that carbohydrate is in a serving of a particular food. You need to know both things to understand a food's effect on blood sugar. That is where glycemic load comes in. The carbohydrate in watermelon, for example, has a high GI. But there isn't a lot of it, so watermelon's glycemic load is relatively low. A GL of 20 or more is high, a GL of 11 to 19 inclusive is medium, and a GL of 10 or less is low.
>
> Foods that have a low GL almost always have a low GI. Foods with an intermediate or high GL range from very low to very high GI.

More information on glycemic index can be found in *The Glucose Revolution* by Jennie Brand-Miller, Thomas M.S. Wolever, Stephen Colagiuri and Kaye Foster-Powell and the website www.mendosa.com/gilists.htm

Other good web sites for tables that include glycemic index and load values include;

http://www.glycemicindex.com/ (University of Sidney's Web Site)

http://diabetes.about.com/library/mendosagi/ngilists.htm