

DiabeteSource™

News For The Diabetes Specialist

Winter 2007 ♦ Vol. 10 No. 1

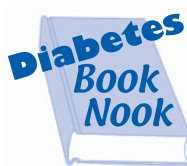
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Glycemic Index Food Guide: Easy-to-Use Guide

by: *Dr. Shari Lieberman*

This book is a great guide to help take control of the Glycemic Index through nutrition. It shows easy-to-use methods for weight loss, cardiovascular health, diabetic management and maximum energy.



Available online at:
www.amazon.com

The GI Diet Cookbook: More Than 100 Low Glycemic-Index Recipes for Healthy Weight Loss

by: *Antony Worrall Thompson,
Mabel Blades, R.D.,
Jane Suthering*

This cookbook contains 100-plus recipes created to emphasize satisfaction, not deprivation. The book touches on the benefits of low GI foods, and explains how to incorporate them into your everyday diet. Thompson's culinary ingenuity and devotion has transformed this formerly "medical" diet into an irresistible lifestyle change.



Available online at:
www.amazon.com

Welcome To The 4th Dimension!

Glycemic Index offers insight into the timing of post-meal BG rises

By: Gary Scheiner
Wynnewood, Pennsylvania

If you think you've mastered everything there is to know about carb counting, it's time for a revelation. Not all carbs are created equal. Another factor that you may want to consider when teaching carb counting is the influence of the Glycemic Index.

Glycemic Index (GI) refers to the speed with which carbohydrates convert into blood glucose (BG). While virtually all carbohydrates (except for fiber and a portion of sugar alcohols) convert into blood glucose eventually, some forms convert much faster than others. Pure glucose is given a GI score of 100; everything else is compared to the digestion/absorption rate of glucose. For example:

BREAD/CRACKERS

Bagel	72
Croissant	67
Graham Crackers	74
Saltine Crackers	74
Wheat Bread	68
White Bread	71

CAKES/COOKIES/CANDY

Blueberry Muffin	59
Chocolate Cake	38
Donut	76
Oatmeal Cookies	55
Vanilla Wafers	77
Jelly Beans	80
Lifesavers®	70
M & M's®, Peanut	33
Snickers® Bar	40

CEREALS/BREAKFAST

Bran Chex	58
Cheerios®	74
Corn Flakes®	83
Cream of Wheat®	70
Grape-Nuts®	67
Oatmeal	49
Pancakes	67
Pop-Tarts®	70
Raisin Bran®	73
Rice Krispies®	82
Waffles	76

COMBINATION FOODS

Chicken Nuggets	46
Fish Fingers	38
Gatorade®	78
Macaroni & Cheese	64
Pizza (cheese)	60
Stuffing	74
Taco Shells	68

VEGETABLES

French Fries	75
Potato, Baked	85
Carrots Raw	16
Corn	46
Peas	48
Sweet Potato	44
Tomato Juice	38

DAIRY

Chocolate Milk	34
Ice Cream, Vanilla	62
Milk, Skim	32
Milk, Whole	27
Yogurt, Low Fat	33

FRUITS & JUICES

Apple	38
Apple Juice	41
Banana	55
Grapefruit	25
Grapes	46
Orange	44
Orange Juice	52
Pear	37
Pineapple	66
Raisins	64
Watermelon	72

LEGUMES

Baked Beans	48
Blackeyed Peas	42
Chick Peas	33
Peanuts	15
Red Kidney Beans	19

GRAIN/PASTA

Fettucini	32
Linguini	55
Macaroni	45
Ravioli	39
Spaghetti	41
Brown Rice	55
Couscous	65
Instant Rice	87
Long Grain Rice	56

SNACK FOODS

Corn Chips	74
Granola Bars	61
Popcorn	55
Potato Chips	54
Pretzels	81
Rice Cakes	77

SOUPS

Black Bean	64
Lentil	44
Minestrone	39
Split Pea	60
Tomato	38





Mark Your Calendar!

American Association of Diabetes Educators

- ◆ 34rd Annual AADE Meeting
August 1-4, 2007
St. Louis, Missouri
www.aadenet.org

American Diabetes Association

- ◆ 67th Annual Scientific Sessions
June 22-26, 2007
Chicago, Illinois
www.diabetes.org



The WebMaster

Website Options For Inquiring Minds

<http://www.glycemicindex.com>

Home of the Glycemic Index

Your link to glycemic index information



Staying in the loop...

Glycemic Index Fact Box

- High-fiber foods raise BG slower than low-fiber foods
- High-fat foods raise BG slower than low-fat foods
- Solids raise BG slower than liquids
- Cold foods raise BG slower than hot foods
- Unripe foods raise BG slower than ripe foods
- Raw foods raise BG slower than cooked foods



DiabeteSource Authors Wanted:

Submit items of interest for upcoming issues to:

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Foods with a high GI (greater than 70) tend to digest and convert to blood glucose the fastest, with a significant blood glucose “peak” occurring in 30-45 minutes. Examples include bread, potatoes, cereal and instant rice. Foods with a moderate GI (approximately 45-70) digest a bit slower, resulting in a less pronounced blood glucose peak approximately one to one and a half hours after eating. Examples include ice cream, orange juice, cake and pizza. Foods with a low GI (below 45) tend to make a gradual appearance in the bloodstream. The blood glucose peak is usually quite modest, and may take several hours to appear.

Most starchy foods have a relatively high GI; they digest easily and convert into blood glucose quickly. Exceptions include “straight chain” starches such as those found in pasta and legumes. Because these starches pack together very tightly, digestive enzymes take a while to break them apart – thus causing a slow, progressive blood glucose rise. Foods that have glucose or dextrose in them tend to have a high GI. Fructose (fruit sugar) and lactose (milk sugar) are slower to convert into blood glucose. Table sugar (sucrose) has a moderate GI because it contains a combination of glucose (which is very fast) and fructose (which is slower). Foods that contain fiber or large amounts of fat tend to have lower GIs than foods that do not.

Why Glycemic Index Is Important

The effect of dietary carbohydrates is what really matters. The slower a carbohydrate digests, the less immediate and dramatic its impact will be. Lower Glycemic Index foods tend to make blood sugars easier to control. They enhance satiety and help to curb appetite. They help to lower triglyceride levels and prevent “reactive” hypoglycemia, and they serve as excellent fuel sources in preparation for endurance exercises. For those who take insulin, knowing the Glycemic Index of a food helps in determining the optimal timing of the meal-time insulin.

Foods with a high GI (greater than 70) tend to raise blood sugar the fastest. For these types of foods, it is best to take mealtime rapid-acting insulin 15-20 minutes prior to eating. This will allow the insulin peak to coincide as closely as possible with the blood sugar peak. Taking insulin for high-GI foods just before or while eating them would produce a significant after-meal blood sugar “spike”, as the insulin would lag behind the blood sugar rise by about half an hour.

Foods with a moderate GI (approximately 45-70) digest a bit slower, with a slightly less pronounced blood sugar peak approximately 60-90 minutes after eating. Taking rapid-acting insulin 15-20 minutes before eating these types of foods could produce a low blood sugar soon after eating. It is best to take insulin immediately prior to foods with a moderate GI.

Foods with a low GI (below 45) tend to cause a slow, gradual blood sugar rise. The blood sugar “peak” is usually quite modest, and may take several hours to appear. Examples include pasta, milk, yogurt and beans. For these types of foods, taking insulin prior to eating is likely to lead to hypoglycemia about one hour later, followed by a delayed blood sugar rise. Instead, try taking the insulin 10-15 minutes after eating. A second option is to split the rapid-acting insulin into two parts: half given with the meal, the other half about an hour later. A third option is to take regular insulin with the meal, rather than a rapid-acting analog. One other option, available to insulin pump users, is to extend the bolus delivery over 60-90 minutes.

A Matter of Accuracy

How accurate is the Glycemic Index? Given the degree of inter-individual variability in digestion and the impact of mixing foods with different Glycemic Index values in the same meal, there is no way to tell exactly when a specific food or meal will cause the blood glucose level to peak. The Glycemic Index is good for categorizing foods according to their relative impact: fast, moderate, and slow.

When looking at complete meals, the main source of carbohydrate should dictate the rate of blood glucose rise. However, don’t forget to take the fat content and size of the meal into account; higher-fat meals will produce a slower blood glucose rise regardless of the nature of the carbohydrate, and larger meals usually take longer to digest than smaller meals.

References:

Brand-Miller, J, et al, The Glucose Revolution. 1998, Marlowe & Company, NY, NY.

Brand-Miller, J. and Foster-Powell, K. New Glucose Revolution Low GI Guide to Diabetes. 2006, Marlowe & Company, NY, NY.

Geil, Patti. From Jelly Beans to Kidney Beans: What Diabetes Educators Should Know About the Glycemic Index. *The Diabetes Educator*. 2001; 27:4. 505-508.

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