Explaining Glycemic Index and Glycemic Load

The glycemic index (GI) is a number that indicates how quickly a particular food will raise the blood sugar. The higher the number, the higher the blood sugar response. Not all of these foods taste "sweet." Even some complex carbohydrates are broken down quickly into sugar in the body, particularly potatoes or grains that have been ground into flour.

Foods with a high glycemic index signal the body to produce large amounts of insulin, a hormone that carries blood sugar into the cells to be used for energy or stored for later use. After eating high GI foods, large amounts of insulin may be released causing a rapid drop in blood sugar (called "reactive hypoglycemia") that can lead to shakiness, "spaciness," or fatigue several hours after eating, as well as an increase in appetite.

High glycemic index foods should be avoided by people who are trying to lose weight, people who have diabetes or may be at high risk for diabetes, and people who have "hypoglycemia" symptoms. If you have any of these conditions, try to avoid foods with a high glycemic index and emphasize foods with GI below 45.

Some foods have low impact on the blood sugar despite their high glycemic index when they are eaten in normal portion sizes. Carrots, for instance, have a high glycemic index, but it takes 6.6 cups of carrots to deliver the same amount of carbohydrate that is found in 1 cup of cooked spaghetti. Since most people do not eat that many carrots at a sitting, carrots do not tend to have a big impact on blood sugar. The Glycemic Load takes the amount of carbs in a typical serving into account along with the glycemic index and can give a more balanced view of how eating typical servings of a particular food will affect blood sugar.

Some basic tips to keep the glycemic load of the diet down include:

- Eat whole grains (i.e., where you can see the grains in your bowl, not where they have been ground into flour.) Limit processed grains.
- Pass on the potatoes and bananas.
- Bring on the beans. Beans are a great source of protein as well as a good source of slowly digested carbohydrates.

For more information, see http://www.mendosa.com/gi.htm or read The GI Diet by Gallop or The New Glucose Revolution by Wolliver

Glycemic Index and Glycemic Load of Certain Foods

	Glycemic Index	Carbs (grams per serving)	Glycemic Load per serving
High	70 or more		20
Medium	50-69		11 to 19
Low	49 or less		10 or less
Fruits			
Apple, 1 average	38	16	6
Banana, 1 whole, ripe	51	26.5	14
Orange, 1 whole	42	12	5
Raisins, ½ cup	64	44	28
Watermelon	72	6	4
Strawberries	40	152	3.6
Vegetables			
Broccoli, ½ cup steamed	6	2	1
Carrots, 1 cup raw	47	6	3
Corn on the cob, 1 ear	53	29	15
Green beans, ½ cup	28	5	1
Baked potato, white	85	30.5	26
Spinach, ½ cup steamed	6	3.5	1
Sweet potato	61	28	17
Tomatoes, 1 cup raw	61	28	17
Grains			
Bagel	72	89	33
Corn tortilla	70	24	7.7
Pumpernickel bread, 1 slice	41	26	4.5
White bread, 1 slice	70	25	8.4
Wheat bread	70	28	7.7
French bread, 1 slice	95	64	29.5
Whole wheat pita	57	64	17
Bran muffin 1 medium	60	113	30
Corn Bread 1 slice	110	60	30.8
Oatmeal 1 cup	58	234	12.8
Oatmeal, instant 1 cup	65	234	13.7
Corn Flakes 1 cup	92	28	21.1
Kellogg's Special K 1 cup	69	31	14.5
Grape Nuts ½ cup	75	58	31.5
Cheerios	74	30	13.3
Coco Pops	77		20.2
Popcorn 1 cup	55	8	2.8
Rice white, 1 cup cooked	64	36	23
Rice brown, 1 cup cooked	55	33	18
Barley	25		10.6
Buckwheat	54		16
Quinoa	53		13
Legumes			
Baked beans 1 cup	48	253	18.2
Chickpeas, boiled 1 cup	31	240	13.3
Kidney beans 1 cup	27	256	7
Lentils 1 cup	29	198	7
Soy beans 1 cup	20	172	1.4
Pinto beans 1 cup	39	171	11.7
Chana Dal	8 - 11	3.9	2.4
Beverages			
Apple Juice 8 oz	40	30	12
Pepsi 8 oz	58	25	15
Tomato juice, ½ cup	38	10	4