

The Glycemic Index

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How The Glycemic Index Works

The endocrine system and the nervous system work together to regulate the appetite so that the right amount of the right kind of food is taken in. Refined white sugar has a high glycemic index and offsets this balance. This high-caloric dynamite explodes the pancreas and pituitary gland into hyper-secretion of hormones. Eating added sugar in various foods and drinks everyday chronically over-stimulates the pituitary and pancreas glands. The thyroid and adrenals also suffer. Many medical journals have implicated refined white sugar as a causative factor in: atherosclerosis, coronary heart disease, kidney disease, liver disease, shortening of life span, making blood platelets stick together, causing rise in serum triglycerides, and increasing the desire for coffee and tobacco.

Why is this important? When excess glucose enters the blood, excessive insulin is produced to transport the excess glucose to the fat cells for storage. Insulin increases the activity of a liver enzyme called HMG CoA reductase, which causes the liver to produce excessive cholesterol.

Cholesterol in the proper amount is necessary for many functions in the body, such as a major constituent of cell membranes, and hormones. Cholesterol becomes a problem only when there is an excess of it in the blood. This is why we want to avoid foods that have a high Glycemic Index.

Insulin increases the activity of an enzyme called delta 5 desaturase, which converts dihomogammalinolenic acid to arachidonic acid. Arachidonic acid produces vasoconstrictive and inflammatory eicosenoids, which lead to arteriosclerosis and cardiovascular disease. Arachidonic acid is also found in high levels in red meat and egg yolks.

You may notice that foods that have a higher fiber content, will have a lower Glycemic Index. Fiber slows the uptake of sugar into the blood stream. Foods that have a high glycemic index will be broken down into glucose faster and therefore enter the blood stream faster, hence causing more insulin to be produced.

The glycemic index is a relative scale for classifying foods according to the blood sugar response that they cause. It measures how fast the carbohydrate of a particular food is converted to glucose and enters the blood. The glycemic index for a particular food may be different for different individuals. The figures below contain the glycemic index values for the average individual.

The numbers used in the glycemic index are percentages with respect to a reference food. In this list, they are given with respect to glucose. For example, brown rice, which has a glycemic index of 58, raises blood sugar more than barley, which has a glycemic index of 26. A food is generally considered to have a high Glycemic Index if it is greater than 50 (1/2 of the value of glucose). Glycemic Index values of

foods below are adjusted proportionately so that Glycemic Index of glucose is equal to 100.

You should avoid eating sugar (sucrose) from this point forward. Fructose (the sugar in fruit) is an excellent substitute. Sugar (sucrose) has a glycemic index of 67. Fructose has a glycemic index of 23. Fructose is technically one-third the glycemic index of sucrose. However, since fructose is twice as sweet to the taste as sucrose, you will use half as much. The effective glycemic index of fructose becomes one-sixth that of sucrose. Also note that protein enriched pasta has a glycemic index of about half that of white pasta. Many pastas are labeled as "enriched" but not "protein enriched," which may relate to iron enriched not protein enriched – read the labels carefully.

The following partial list is a compilation of several Glycemic Index studies.

Bakery Products

Cake, sponge	48
Cake, banana, made with sugar	49
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Cake, pound	56
Pizza, cheese	63
Muffins	64
Cake, flan	68
Cake, angel food	69
Croissant	70
Crumpet	72
Donut	79
Waffles	80

Beverages

Coffee and Tea	0
Soy milk	31
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Soft drink, Fanta	71
Rice milk	85
Lucozade	99

Breads

Bürgen Soy Lin	20
Bürgen Oat Bran & Honey Loaf	31
Barley kernel bread	40
Rye Kernel bread	48
Fruit loaf	49
Oat bran bread	50
Mixed grain bread	50
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Pumpernickel	52
Bulger bread	55
Linseed rye bread	57
Pita bread, white	60
Whole grain bread	65
Rye flour bread	67
Semolina bread	67
Oat kernel bread	68
Barley flour bread	69
Wheat bread, wholemeal flour	72
Melba toast	73
Wheat bread, white	74
Bagel, white	75
Wheat bread, gluten free	94
French baguette	99

Breakfast Cereals

Rice Bran	20
All-bran	44
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Bran Buds	55
Special K	56
Oat Bran	57
Muesli	58
Porridge (oatmeal)	64
Nutri-grain	69
Grapenuts	70
Shredded Wheat	72
Cream of Wheat	73
Puffed Wheat	77
Cheerios	77
Corn Bran	78
Total	80
Cocopops	80
Rice Krispies	85
Cornflakes	87
Crispix	91
Rice Chex	93

Cereal Grains

Bran, wheat or oat	15
Wheat germ	15
Barley, pearled	26
Rye	35
Kamut (heat)	40
Oats	40
Wheat kernels	43
Bulgur	50
Rice, parboiled	50
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Barley, cracked	53
Wheat, quick cooking	56
Buckwheat	57
Sweet corn	57
Rice, brown	58
Rice, wild, Saskatchewan	59
Oatmeal	60
Pearled Barley	60
Rice, white	61
Barley, rolled	69
Taco shells	71
Cornmeal	72
Millet	74
Tapioca, boiled with milk	84
Puffed rice	85
Rice, instant, boiled 6 min.	93

Cookies

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Oatmeal	58
Rich Tea	58
Shortbread	66
Arrowroot	69
Graham	77
Vanilla	80

Crackers

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High Fibre Rye Crispbread	68
Breton Wheat Crackers	70
Stoned Wheat Thins	70
Water Crackers	74
Rice Cakes	80
Puffed Crispbread	85

Dairy Foods

Cream	0
Yogurt, low fat, artificially sweet	15
Milk	30
Yogurt, low fat, fruit sugar sweet	34
Milk, chocolate, sugar sweetened	36
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Ice Cream	64

Flours

Almond Flour	15?
Soy Flour	25
Rye Flour	45
Quinoa Flour	45
Kamut Flour	45
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Chestnut Flour	65
Potato Starch	95
White Rice Flour	95
Arrow Root Starch	85
White Wheat Flour	85
Whole wheat flour	80

Fruit

Cherries	23
Raspberries, fresh	25
Strawberries	25
Grapefruit	30
Apricots, dried	32
Apple	35
Coconut	35
Oranges	35
Peaches	35
Plums	35
Coconut Milk	40
Pear, fresh	39
Plum	40
Apple juice	42
Peach, fresh	44
Pineapple, fresh	45
Orange	46
Grapes	45
Pineapple juice	48
Grapefruit juice	50
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Orange juice	54
Kiwifruit	55
Mango	58
Apricots, fresh	60

Banana-----	60
Raisins-----	66
Muskmelon or Cantaloupe-----	68
Pineapple -----	69
Watermelon-----	75

Legumes

Soy beans, canned -----	15
Soy beans -----	18
Lentils, red -----	26
Beans, dried -----	29
Lentils-----	30
White beans -----	35
Kidney beans-----	40
Split peas, yellow, boiled-----	33
Lima beans, baby, frozen-----	34
Garbanzo beans -----	34
Navy beans -----	39
Pinto beans -----	40
Black-eyed beans-----	43
Garbanzo beans, canned -----	44
Pinto beans, canned -----	47
Romano beans -----	47
Baked beans, canned -----	50

Kidney beans, canned-----	54
Lentils, green, canned-----	54
Kidney beans, canned-----	54
Beans, dried, P. vulgaris-----	73
Broad beans (fava beans) -----	82

Nuts/Seeds

Almonds -----	15
Hazel nuts-----	15
Cashew nuts-----	15
Walnuts -----	15
Sunflower seeds-----	35
Chestnut -----	60

Pasta

Spaghetti, protein enriched-----	28
Fettuccine-----	34
Vermicelli-----	37
Star pastina -----	39
Spaghetti, white-----	43
Linguine -----	47
Instant noodles-----	49
Whole wheat -----	50

Spaghetti, durum-----	57
Lasagna (hard wheat) -----	60
Couscous-----	68
Gnocchi -----	69
Lasagna (soft wheat)-----	75
Rice pasta, brown -----	96

Rice

Wild rice-----	35
Brown basmati rice -----	45
Basmati rice-----	50
Brown rice -----	50

White rice -----	72

Root Vegetables

Onions -----	15
Garlic -----	30

Carrots-----	51
Yam-----	53
Sweet potato -----	56
Beets -----	66
Potato, steamed -----	68
Rutabaga -----	75
Potato, boiled, mashed-----	76
French fries -----	78
Potato, instant -----	86
Potato, baked -----	88
Potato, fried -----	95
Parsnips -----	101

Snack Foods

Peanuts	15
Peanut button, unsweetened	40
Jams and marmalades	51
Chocolate	51
Potato crisps	56
Popcorn	58
Mars Bar	66
Life Savers	73
Corn chips	77
Jelly beans	83
Pretzels	85
Dates	103

Soups

Tomato Soup	39
Lentil soup, canned	46
Split pea soup	63
Black bean soup	67
Green pea soup, canned	69

Sugars/Sweeteners

Stevia	0
Fructose (twice as sweet as sucrose)	23
Lactose	47
Honey	61
High fructose corn syrup	65
Maple Syrup	65
Sucrose	67
Glucose	100
Maltodextrin	110
Maltose	110
Corn Syrup	115

Vegetables

Celery	15
Fennel	15
Mushrooms	15
Olives	15
Lettuce	15
Spinach	15
Sprouted seeds	15
Eggplant	20
Peas, dried	23
Tomatoes	30

Turnip, raw	30
Peas, green	35
Marrowfat, dried	41
Peas, green	50
Sweet corn	65
Pumpkin	78
Turnip, cooked	85

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