

MMC FACT SHEET 11 (2011)

GLYCAEMIC INDEX

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'**Glycaemia**' means blood sugar. The '**Glycaemic Index**' (G.I.) refers to a list of foods where each is given a numerical value, compared to glucose or white bread, reflecting the effect it has to raise blood sugar levels. The following G.I. table scores each food relative to glucose (glucose = 100).

Why the interest in the Glycaemic Index?

Sugar and the foods listed as '**HIGH**' in the table below cause a rapid release of the hormone insulin from the pancreas gland into the bloodstream. Insulin regulates the sugar level by encouraging sugar entry into the body's cells. However **when insulin is produced to excess it stimulates the storage of fat, and inhibits the mobilisation of fat as well as signaling the liver to make cholesterol**. Studies have also documented that insulin at low levels may inhibit fat breakdown. The more refined carbohydrate consumed, the greater the amount of insulin produced and the tendency to gain weight. With time the raised levels of circulating insulin (**hyperinsulinaemia**) lose their effectiveness in reducing sugar (**insulin resistance**) and the diabetic process begins.

In 1988 Dr Gerald Reaven of Stanford University coined the term **Syndrome X** for a cluster of symptoms that occurred where insulin resistance was present. Hyperinsulinaemia is now recognised as a major factor in the causation of the following conditions: **Diabetes, obesity, heart disease, raised blood fats (cholesterol and triglyceride), hypertension and polycystic ovarian disease**. Excessive insulin has also been shown to have a cancer-promoting action.

GRAINS, BREADS AND CEREALS

HIGH

<i>White bread</i>	95	<i>Bread Stuffing</i>	74	<i>Grape Nuts</i>	65
<i>French Bread</i>	95	<i>Water Crackers</i>	72	<i>Milk Arrowroot biscuits</i>	65
<i>Instant Rice</i>	90	<i>Croissants</i>	70	<i>Whole wheat crackers</i>	65
<i>Rice Bubbles</i>	89	<i>Corn meal and bread</i>	70	<i>Nutri-grain cereal</i>	65
<i>Pretzels</i>	85	<i>White Rice</i>	70	<i>Regular Pasta</i>	65
<i>Cornflakes</i>	84	<i>Taco shells</i>	70	<i>Shortbread</i>	64
<i>Tapioca</i>	81	<i>Cream of wheat</i>	70	<i>Hamburger Bun</i>	61
<i>Rice Cakes</i>	80	<i>Shredded Wheat white flour</i>		<i>Shredded wheat biscuit</i>	
<i>Rice crispies</i>	80		70		62
<i>Corn Chips</i>	75	<i>Melba Toast</i>	70	<i>Couscous</i>	60
<i>White Bagel</i>	75	<i>Millet</i>	70	<i>Basmati Rice</i>	60
<i>Puffed Wheat</i>	75	<i>Ryvita & Kavli crispbreads</i>		<i>Spaghetti, white</i>	60
<i>Weetbix</i>	74		70	<i>Sweetcorn</i>	60

MODERATE

<i>Vogels Rye Bread</i>	59	<i>Whole Grain pumpernickel</i>	50	<i>Wheat grain</i>	45
<i>Pita Bread regular</i>	55	<i>Cracked-wheat bulgur bread</i>		<i>Barley grain</i>	45
<i>Rye Sourdough</i>	55		50	<i>Whole grain pasta</i>	45
<i>Wild Rice</i>	55	<i>High cracked wheat</i>	50	<i>All Bran (no sugar)</i>	40
<i>Brown Rice</i>	55	<i>Whole Rice</i>	50	<i>Wholemeal Spaghetti</i>	40
<i>Oatmeal/porridge</i>	55	<i>Oat and Bran bread</i>	50		
<i>Muesli (no sugar)</i>	55	<i>Pita Bread wholemeal</i>	50		

LOW

<i>Rye grain</i>	35	<i>Burgen Oat Bran, honey with Barley</i>	31
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VEGETABLES

HIGH

<i>Baked potatoes</i>	95	<i>Potatoes microwaved</i>	82	<i>Potatoes steamed</i>	65
<i>Parsnips</i>	95	<i>French-fries</i>	80	<i>Mashed potatoes</i>	67
<i>Instant potatoes</i>	83	<i>Beets</i>	75	<i>Sweet corn</i>	60
<i>Carrots</i>	85	<i>Pumpkin</i>	75		

MODERATE

<i>Kumara</i>	55	<i>Green peas</i>	45	<i>Black eyed peas</i>	40
<i>Yams</i>	50	<i>Pinto beans canned</i>	45		
<i>Baked beans</i>	48	<i>Chick peas</i>	41		

LOW

<i>Dried beans, lentils</i>	30-40	<i>Lima beans</i>	30	<i>Kidney beans</i>	30
<i>Pinto beans</i>	40	<i>Black beans</i>	30	<i>Soy beans</i>	15
<i>Green beans</i>	40	<i>Butter beans</i>	30	<i>Green vegetables</i>	0-15

FRUIT

HIGH

<i>Watermelon</i>	70	<i>Raisins</i>	65	<i>Pawpaw</i>	60
<i>Pineapple</i>	65	<i>Ripe banana</i>	60	<i>Sultanas</i>	56

MODERATE

<i>Mango</i>	50	<i>Pears</i>	45	<i>Apple juice (unsweet.)</i>	40
<i>Kiwifruit</i>	50	<i>Peaches</i>	40	<i>Oranges</i>	40
<i>Grapes</i>	50	<i>Plums</i>	40		
<i>Plantain banana</i>	45	<i>Apples</i>	40		

LOW

<i>Apricots, dried</i>	30	<i>Cherries</i>	25	<i>Apricots, fresh</i>	10
<i>Grapefruit</i>	25	<i>Tomatoes</i>	15		

DAIRY PRODUCTS AND OTHERS

HIGH

<i>Maltose (as in beer)</i>	105	<i>Pretzels</i>	80	<i>Refined sugar</i>	75
<i>Glucose</i>	100	<i>Honey</i>	75	<i>Ice-cream, premium</i>	60

MODERATE

<i>Popcorn</i>	55	<i>Yoghurt, added fruit</i>	35		
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LOW

<i>Milk, whole</i>	> 30	<i>Milk, skim</i>	< 30	<i>Yoghurt, low fat</i>	14
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Recommended Reading: *The New Glucose Revolution Low GI Guide to Sugar and Energy*: The Authoritative Guide to the Sugar-Glycaemic Index Connection by Jennie Brand-Millar