

Glycaemic Index

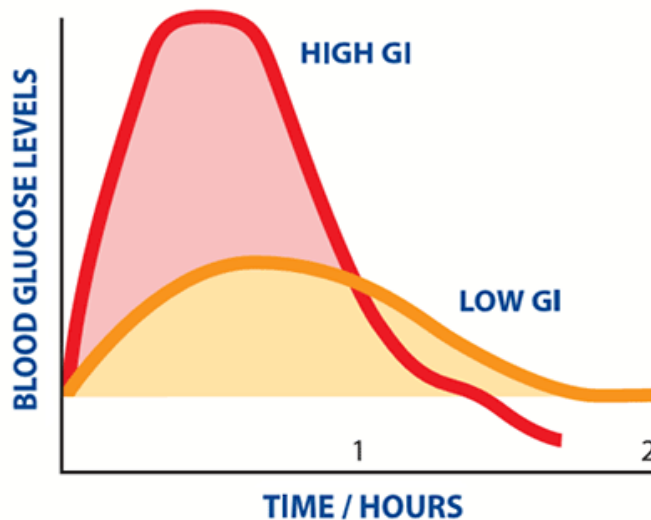
There are many types of carbohydrates and they all behave differently in the body. This is because starchy foods are digested at different rates, which has an effect on blood glucose (blood sugar) levels. The Glycaemic Index (GI) is a ranking of how quickly these foods make your blood glucose levels rise after eating them.

Which foods contain carbohydrate?

- Starchy foods, such as bread, pasta, chapattis, potatoes, yam, noodles, rice and cereals.
- Fruit and fruit juice.
- Some dairy products, such as milk and yoghurts.
- Sugar and other sweet foods.
- Non-diet soft drinks.
- Pies, pastries, biscuits and cakes.

Each time a sugary or starchy food or drink is consumed, the blood glucose level in the body rises. Some of these foods are quickly digested and cause quick and sharp rises in the blood glucose levels – they are called high-GI foods and drinks. Low-GI foods and drink, which are more slowly digested, make the blood glucose rise more slowly. These are sometimes called ‘slow-release’ carbohydrates.

The impact on blood sugar levels of low GI compared to high GI foods



www.glycemicindex.com

Foods with a high GI are not necessarily bad foods. For example, potato crisps have a medium GI but a baked potato has a high GI. Despite this, a baked potato is better for your health than potato crisps, which are higher in fat and salt. Also, all lower-GI foods are not necessarily healthy – chocolate and ice cream have a low-to-medium GI rating. So, the key is to use GI in the context of balanced eating.

How to use GI

The GI value of a food is tested on the food when eaten on its own, and there are published lists of high-, medium- and low-GI foods. However, it is not helpful to use the GI values in isolation, as we generally eat food in combination with other foods. GI needs to be taken in the context of varied, balanced eating for it to be successfully incorporated into a healthy diet.

Carbohydrate food	Lower GI choice
Bread	Multigrain, granary, rye, seeded, wholegrain, oat, pita bread and chapatti
Potatoes	New potatoes in their skins, sweet potato and yam
Pasta	All pasta – cook until al dente – and noodles
Rice	Basmati rice, long grain and brown rice
Other grains	Bulgur wheat, barley, couscous and quinoa
Breakfast cereals	Porridge, muesli and most oat and bran-based cereals

A healthy way to use the GI principles is to incorporate a range of lower-GI carbs that are also low in fat and calories into meals. So, when you choose a low-GI breakfast like porridge, consider making it with skimmed, 1% or semi-skimmed milk and sweetening it with minimal sugar and some dried fruit.

When buying a sandwich, go for granary bread and think about healthier fillings like chicken tikka, tuna, hummus or roasted vegetables.

GI and weight management

GI is a well-known dieting tool, however it can be restricting as it measures foods per 50g of carbohydrate provided and not by portion size, and so foods like carrots are included in the high-GI list along with other important fruits and vegetables.

There is some research to suggest that slow, steady rises and falls in glucose may help control appetite. You may notice a claim, ‘feel fuller for longer’ on the label of lower-GI foods but this is not a permitted claim so food manufacturers cannot relate GI to fullness on a food label. Although many low-GI foods are also filling, there isn’t enough evidence to suggest that all low-GI foods can help you to feel full. GI is not a magic bullet for weight loss:

- Lower-GI foods can help you to manage your weight if they are eaten as part of a calorie-controlled diet in conjunction with regular physical activity.
- Lower-GI foods like wholegrain, fruit, beans, lentils and vegetables are generally low in calories too: they also have a lower GI.
- Some lower-GI foods (such as chocolate cake) may be high in fat or calories and so they are not a healthy choice.

Glycaemic load

Glycaemic Load (GL) is a sum which takes into account the GI of a food and the available carbohydrate content in a serving of that food. Like GI, the higher the GL, the faster the expected rise in blood sugar.

For example, carrots have a high GI but a low GL. This is because GI is based on the rise caused by consuming 50g of carbohydrate from any food. So to get 50g of carbohydrate from carrots you would need to eat around 700g of carrots – about five whole carrots – to cause this blood sugar rise. As a portion of carrots eaten is much smaller, at 60g rather than 700g, carrots can be considered as having a low GL and therefore can be included in your diet. www.bda.uk.com/foodfacts

Glycaemic index numbers

Foods containing carbohydrates can have a glycaemic index number. This number is worked out by giving volunteers 50 g of the food and then checking their blood glucose levels over 2 hours. The maximum amount that a food increases blood glucose levels by is then divided by the amount that pure glucose increases the level by, and the result is multiplied by 100. This is repeated with 10 people and an average (mean) is calculated. The table below shows some values.

Low Glycaemic Index foods (55 or less)

Food	GI
Roasted and salted peanuts	14
Low-fat yoghurt with sweetener	14
Cherries	22
Grapefruit	25
Pearl barley	25
Red lentils	26
Whole milk	27
Dried apricots	31
Butter beans	31
Fettucine pasta	32
Skimmed milk	32
Low-fat fruit yoghurt	33
Wholemeal spaghetti	37
Apples	38
Pears	38
Tomato soup, canned	38
Apple juice, unsweetened	40
Noodles	40
White spaghetti	41
All Bran	42
Chick peas, canned	42
Peaches	42
Porridge made with water	42
Lentil soup	44
Oranges	44
Macaroni	45
Green grapes	46
Orange juice	46
Peas	48
Baked beans in tomato sauce	48
Carrots, boiled	49
Milk chocolate	49
Kiwi fruit	52
Stoneground wholemeal bread	53
Crisps	54

Special K	54
Banana	55
Raw oat bran	55
Sweetcorn	55


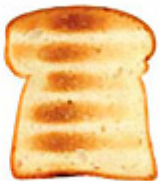



Medium Glycaemic Index foods (56 to 69)

Food	GI
Muesli, non-toasted	56
Boiled potatoes	56
Sultanas	56
Pitta bread	57
Basmati Rice	58
Honey	58
Digestive biscuit	59
Cheese and tomato pizza	60
Ice cream	61
New potatoes	62
Coca cola	63
Apricots, canned in syrup	64
Raisins	64
Shortbread biscuit	64
Couscous	65
Rye bread	65
Pineapple, fresh	66
Cantaloupe melon	67
Croissant	67
Shredded wheat	67
Mars bar	68
Ryvita	69
Crumpet, toasted	69
Weetabix	69
Wholemeal bread	69

High Glycaemic Index foods (70 or more)

Food	GI
Mashed potato	70
White bread	70
Watermelon	72
Swede	72
Bagel	72
Branflakes	74
Cheerios	74
French fries	75
Coco Pops	77
Jelly beans	80
Rice cakes	82
Rice Krispies	82
Cornflakes	84
Jacket potato	85
Puffed wheat	89
Baguette	95
Parsnips, boiled	97
White rice, steamed	98

http://www.weightlossresources.co.uk/diet/gi_diet/glycaemic_index_tables.htm

GLYCEMIC INDEX CHART									
Low Glycemic (55 or Below)					High Glycemic (70 or Higher)				
SNACKS		STARCH		VEGETABLES		FRUITS		DAIRY	
G.I.		G.I.		G.I.		G.I.		G.I.	
									
33	Pizza	33	Bagel, Plain	10	Broccoli	22	Cherries	14	Yogurt, Plain
49	Chocolate Bar	38	White Rice	10	Pepper	38	Apple	14	Yogurt, Low Fat
54	Pound Cake	38	White Spaghetti	10	Lettuce	43	Orange	30	Whole Milk
55	Popcorn	44	Sweet Potato	10	Mushrooms	46	Grapes	31	Soy Milk
58	Energy Bar	49	White Bread	10	Onions	52	Kiwi	32	Skim Milk
72	Soda	55	Brown Rice	48	Green Peas	56	Banana	35	Chocolate Milk
76	Doughnut	67	Pancakes	49	Carrots	66	Pineapple	36	Yogurt, Fruit
80	Jelly Beans	80	Wheat Bread	64	Beets	72	Watermelon	43	Custard
83	Pretzels	85	Baked Potato	75	Onions	103	Dates	60	Ice Cream

Glycemic Index values obtained from www.lowglycemicdiet.com, www.nutritiondata.com and www.diabetesnet.com