

Demystifying the Glycaemic Index (GI)

Choosing low GI foods has long been associated with being an effective approach to weight loss. Low GI diets are also recommended by clinicians for the long-term management of certain health conditions such as diabetes and Polycystic Ovary Syndrome (PCOS).

Here we explain what 'low GI' means, how you can eat a combination of low GI foods, five to six times a day and still lose weight, and then how to maintain the losses. However, you may always apply portion control.

In effect, all carbohydrate foods such as bread, rice, cereals, potatoes, pasta and foods containing sugar are broken down in the stomach and intestine and converted into a simple sugar called glucose. The speed at which glucose is absorbed into our bloodstream and by how much it raises our blood sugar levels can be measured, and it is called the Glycaemic index (GI) of foods.

High GI foods are absorbed fast and will cause a rapid increase in blood sugar levels. Foods with a low GI will release sugar at a slower rate.

Normally, a hormone called insulin carefully controls the amount of sugar in our blood. So a rapid increase in blood sugars will trigger the release of large quantities of insulin. In theory, the problem starts with a prolonged intake of high GI foods which encourages the body to overproduce insulin. This is seen as a problem because having high levels of insulin encourages the body to store fat.

People with PCOS or diabetes may have a more marked response to the GI of foods. In these conditions, the body does not respond well to normal levels of insulin. To compensate, more insulin is produced, which as mentioned before, encourages the body to store fat. But worse still, in people with PCOS or diabetes, insulin resistance worsens as body weight increases, so it can become a vicious cycle.

For this reason, a regular meal pattern of at least three meals and two to three snacks per day, including foods with a low GI may help with the long-term management of PCOS and diabetes.

In healthy individuals, stabilising blood sugar and insulin levels may also help with managing body weight. Sudden rises and drops in blood sugar levels have been associated with the development of food cravings, poor appetite control and overeating.

What is more, because low GI foods release sugars slowly, the body may be forced to burn off fat for energy. So switching to low GI foods may be an effective long-term approach to weight control.

The basics of eating a low GI diet are to eat carbohydrate foods that raise blood sugar levels slowly. There is no need to cut out whole food groups. The advantage of low GI eating is that it is not a temporary diet. It is a natural, balanced way of eating that can be followed for life. So you will not be trapped in the cycle of yo-yo dieting of weight loss and regain.

What else can affect the GI of foods?

Fibre

Soluble and insoluble fibre found in oats, pulses, grains and fruits slow down the passage of food through the digestive tract, delaying the release of sugar to the blood.

Starch and sugars

Some types of starch such as that present in basmati rice, is hard to break down and to digest and have a low GI. However, starches present in standard long grain and brown rice are easily broken down and have a high GI.

Sugar present in fruit is hard to digest and will have a low GI. Sugars in sweets or biscuits are easy to digest and have a high GI. Adding table sugar, syrup or honey to food pushes up the GI rating. So, tinned fruit in syrup has a higher GI than tinned fruit in juice.

Processing and cooking

Any processing or cooking will raise the GI rating of foods. For this reason it is better to slightly undercook vegetables and pasta. This will also help prevent excessive losses of essential vitamins and nutrients from food when cooking.

For the same reason, it is better to eat fruit than to drink fruit juice or smoothies.

Quantity

Even low GI foods when eaten in large quantities can cause blood sugar levels to rise suddenly. Furthermore, low GI does not mean calorie-free, so you need to follow portion control.

Other main points to help you control your blood sugar levels

- Eat at least 3 meals a day: breakfast, midday, and evening meal
- Eat 2-3 snacks each day: mid-morning, mid-afternoon and before bed
- Never skip meals
- Make sure that your breakfast contains low-GI foods

The following table shows the GI of some of the most common foods

POTATOES & VEGETABLES		
LOW	Medium	High
<ul style="list-style-type: none"> ● Yam, peeled, boiled ● Carrots ● Tomatoes ● Mushrooms ● Beans ● Cauliflower ● Celery ● Avocados ● Spinach ● Peppers ● Peas (all types) 	<ul style="list-style-type: none"> ● New potatoes ● Artichokes ● Beetroot ● Corn ● Sweet potatoes ● Roast potatoes 	<ul style="list-style-type: none"> ● French fries ● Boiled potatoes ● Mashed potatoes ● Baked potatoes ● Microwaved ● Instant ● Pumpkin ● Swede
BREADS, CAKES & Other		
<ul style="list-style-type: none"> ● Multigrain ● Seedy ● Granary ● Chapati (made with besan or barley flour) ● Wholegrain ● Yoghurts ● Muesli bar, chewy ● Ice-cream, vanilla 	<ul style="list-style-type: none"> ● Pitta bread, wholemeal ● Rye bread ● Crumpet, white ● Chocolate ● Digestive biscuits ● Oatmeal biscuits 	<ul style="list-style-type: none"> ● White flour breads ● Bagels ● Baguettes ● Biscuits ● Cakes ● Doughnuts ● Muffins ● Popcorn ● Rice cakes
PASTA & GRAINS		
<ul style="list-style-type: none"> ● Basmati rice ● Rye ● White spaghetti ● Wholemeal pasta ● Linguine ● Macaroni ● Quinoa ● Bulgar ● Noodles ● Buckwheat, boiled 	<ul style="list-style-type: none"> ● Wild rice, boiled ● Couscous ● Taco shells ● Gnocchi ● Risotto rice ● White rice ● Rice noodles 	<ul style="list-style-type: none"> ● Millet ● Corn pasta ● Tapioca ● Jasmine rice ● Long-grain rice ● Instant rice ● Rice cooked in slow cooker
BREAKFAST CEREALS		
<ul style="list-style-type: none"> ● All Bran ● Toasted muesli 	<ul style="list-style-type: none"> ● Porridge ● Rolled oats ● Frosties ● Shredded Wheat ● Weetabix 	<ul style="list-style-type: none"> ● Special K ● Coco pops ● Cornflakes ● Instant porridge ● Rice Krispies ● Crunchy Nut Corn Flakes ● Puffed Wheat

Example meal plan with low GI foods

Breakfast

A bowl of porridge, made with 3 tablespoons of rolled oats and skimmed or semi-skimmed milk

1 small banana (avoid overripe bananas, they have a high GI score)

Cup of coffee or tea with no added sugar

Mid-morning

1 serving of fruit - 1 apple or 1 pear or handful of grapes or 1 orange or 2 kiwis, etc.

Midday Meal

Tuna sandwich made with 1 medium granary bread roll (size of the palm of your hand), 1 tin of tuna (avoid tuna in oil), and 2 teaspoons of low-fat mayo

4-5 cherry tomatoes

One small bar of chocolate (maximum 150 Kcals / calories)

A drink of tea, coffee, water or sugar-free flavoured water

Mid-afternoon

1 medium pot of fat-free yoghurt

Evening Meal

4 heaped tablespoons of Chicken and vegetable curry with 4 heaped tablespoons of boiled basmati rice

Side fresh salad (if salad cream is added, choose one that is fat-free or low fat)

Fresh fruit salad (berries are ideal low calorie puddings)

Bedtime Snack

1 glass of warm skimmed or semi-skimmed milk