

Glycemic Index (G.I.)

The **Glycemic Index (GI)** is a measure of the effect that carbohydrate foods have on your blood glucose levels. **Carbohydrate foods** include foods such as bread, rice, pasta, potato, sweet potato, legumes, fruit, dairy/soy products, sweets and cereals.



Low GI foods break down slowly during digestion. They are gradually released into the bloodstream. These foods tend to be more satisfying to the appetite.



High GI foods break down quickly during digestion. They have a fast and high blood glucose response, which requires a high production of insulin to enable absorption. These foods tend to be less satisfying to the appetite and can make blood glucose control difficult to manage.

Significance of the Glycemic Index

- Low GI means a smaller rise in blood glucose
- Low GI diets can help people lose body weight by increasing fullness after a meal
- Insulin is a hormone that prevents fat burning: eating a low GI diet can ensure insulin levels are not elevated to a level that prevents fat burning
- Eating a low GI diet can decrease blood fats which assists in prevention of heart disease
- Low GI diets can improve the body's sensitivity to insulin
- High GI foods can help re-fuel carbohydrate stores after exercise



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Using the Glycemic Index

The GI is useful for the general population and especially for:

- People with Diabetes or impaired glucose tolerance
- People with Heart Disease (or a family history of Heart Disease)
- Those interested in weight control
- Women with Polycystic Ovarian Syndrome



Tips on switching to a Low GI Diet

- Use breakfast cereals based on wheat-bran, barley and/or oats
- Use breads made with whole grains and seeds
- Use sweet potato, long grain rice (e.g. basmati rice) or pasta **in place of** potatoes and short grain rice
- Try adding vinegar and lemon juice dressings to your meal- (this works by lowering the GI of the food)
- Choose fruit and yoghurt for snacks
- Include beans and lentils with meals



Does quantity count?

Choosing mainly Low-Moderate GI foods will assist in a more even blood glucose level. However, the glycemic load of each meal is important. **If you eat large quantities of these Low-Moderate GI foods they can still result in a high blood glucose level.**

A good example of this is pasta and rice. It is easy to consume 2-3 cups of pasta/rice (cooked) in one meal but keep in mind this is equivalent to 4-6 slices of bread. See the sample meal plan as a guide to suitable portion sizes of carbohydrate foods. Generally the Australian Guide to Healthy Eating recommends a minimum of 4 serves of breads and cereals per day for adults.

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Sports people

For sports people, it is recommended that you consume a low GI meal 2-3 hours prior to your event, and top up with high GI foods between races, during long events and during immediate recovery. Your serves of bread are likely to be higher than 4 serves per day.

High GI snacks could be:

- A honey sandwich
- A sports drink
- Tub of creamed rice
- Rice bubbles or cornflakes with low fat milk
- Jelly beans or lollies
- A very ripe banana
- Watermelon



Low GI healthy eating ideas

Breakfast

Tub of low fat yoghurt with a sliced peach and raspberries spooned through, **or** porridge sprinkled with raisins and brown sugar

Lunch

Wholemeal pita bread spread with hummus and filled with salad, **or** green salad with canned bean mix topped with vinaigrette and 2 slices of grainy bread

Dinner

Grilled chicken with steamed mixed vegetables or vegetable stir fry with diced lean meat and brown/basmati rice



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A Guide To Glycemic Index

Food	High G.I. (GI value of 70 or above)	Moderate G.I. (GI value of 56-69)	Low G.I. (GI value of 55 or less)
Bread	<ul style="list-style-type: none"> • High fibre white breads • White bread • French Baguette • Bagel • Pikelets • English muffin • Lebanese bread-white • Buckwheat pan-cakes (Orgran) 	<ul style="list-style-type: none"> • Multigrain breads (some) • Wholemeal bread (most) • Crumpet • Helgas classic Seed Loaf • Roggenbrot (Vogels) • Pita bread • Taco shells • Dark rye bread 	<ul style="list-style-type: none"> • Burgen (Soy-Lin, Mixed Grain, Fruit Loaf) • Vogels (Honey and Oat Loaf) • Hyfibe wholemeal with wheatgerm • Performax bread (Country Life) • Ploughmans loaf – mixed grain • Tip Top Multigrain Wonder White Low GI • Tip Top Up • Baker's Delight Hi Fibre Low GI white • Sourdough bread
Cereal	<ul style="list-style-type: none"> • Rice Bubbles • Coco Pops • Corn Flakes • Puffed Wheat • Rice Krispies • Sultana Bran • Bran Flakes • Wheat Bites • Crispix • Fibre Plus Breakfast Bar • K Time Just Right Bar 	<ul style="list-style-type: none"> • Vita Brits • Minute Oats • Shredded wheat • Weet Bix • Miniwheats • Just Right • Sustain Breakfast Bar • Healthwise for Bowel Health • Semolina 	<ul style="list-style-type: none"> • Rolled Oats (traditional) • All-Bran, All-Bran Fruit 'n' Oats • Guardian • Muesli - natural • Complete Oven Baked Muesli • Healthwise for Heart Health • Rice Bran • Oat Bran • OatBran and Fruit (Lowan) • Sustain

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Rice, Pasta and Grains	<ul style="list-style-type: none"> • Calrose white rice • Jasmine rice • Sunbrown quick rice • Semolina • Millet • Gnocchi 	<ul style="list-style-type: none"> • Basmati rice • Mahatma premium classic long grain • Popcorn • Cornmeal/Polenta • Cous Cous 	<ul style="list-style-type: none"> • Pearl barley • Buckwheat • Pasta (wheat) • Bulghur wheat • Taboulleh • Sushi • Sunrice Doongara "Clever Rice"
Biscuits	<ul style="list-style-type: none"> • Morning Coffee • Water Crackers • Cruskits • Rice Cakes • Puffed Crispbreads • Waffles • Saos • Pretzels • Scones • Roll-ups • Real Fruit bars 	<ul style="list-style-type: none"> • Shredded Wheat-meal • Ryvita • Milk ArrowRoot Biscuits • Jatz • Shortbread (Arnotts) 	<ul style="list-style-type: none"> • Spicy Fruit Roll • Full o Fruit • Vita Wheat 9 Grain • Ryvita Grain • Oatmeal biscuits
Starchy Vegetables and Legumes	<ul style="list-style-type: none"> • Potato • Instant potato 	<ul style="list-style-type: none"> • Swede • Split pea soup 	<ul style="list-style-type: none"> • Sweet potato • Corn • Legumes e.g. Baked Beans • Lima beans, Soya beans • Chick peas • Split peas • Haricot beans • Kidney beans • Lentils

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Fruit	<ul style="list-style-type: none"> • Watermelon • Dates (dried) • Lychee (canned) 	<ul style="list-style-type: none"> • Banana • Paw-paw • Rockmelons • Sultanas • Raisins • Pineapple • Figs (dried) 	<ul style="list-style-type: none"> • Apple • Cherries • Grapefruit • Grapes • Kiwifruit • Mango • Oranges • Peaches, plums • Pear • Dried apricots • Dried apple <p>*Please note that strawberries and other berries contain small amounts of carbohydrate and therefore have a negligible effect on blood glucose levels.</p>
Dairy and Dessert	<ul style="list-style-type: none"> • Tofu frozen dessert • Doughnuts • Jelly beans 	<ul style="list-style-type: none"> • Vitari • Ice cream 	<ul style="list-style-type: none"> • Skim or low fat milk • Yakult/drinking yoghurt • Plain Yoghurt • Low-fat fruit yoghurt • Trim custard (reduced fat) • Ice-cream (low fat) • Soy milk (including fla-

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Sample Meal Plan: Low GI

Breakfast

1 and $\frac{1}{3}$ cup of Guardian or 1 cup porridge (made with traditional oats) plus reduced fat milk

or Baked beans ($\frac{1}{2}$ cup) on wholegrain bread (1-2 pieces)

or Wholemeal/grain fruit loaf with ricotta cheese

plus 1 fruit (eg apple/ orange/ pear)

Morning Tea

Tub low fat yoghurt (200g) or low fat flavoured/plain milk (250ml)

plus 10 almonds

Lunch

1-2 sandwiches made on low GI bread (eg soy & linseed) filled with salad plus any of the following; hummus, salmon, tuna, egg, lean sandwich meat

plus 1 fruit (eg orange, pear)

Afternoon Tea

1 fruit (eg orange, firm banana)

Dinner

1-2 cups of pasta with tomato/vegetable based sauce plus a side salad.

or 150 grams of fish or 100 grams of lean meat plus sweet potato, greens and a small corn cob.

or 2 Lentil/ bean patties with a green salad

or Hokkein noodle stir fry with Asian greens, nuts and/or lean meat

plus fruit salad with a scoop of reduced fat ice-cream or yoghurt

*****Plus 2 litres of water throughout the day*****

FURTHER INFORMATION

Our outpatient Dietitian is located within the hospital and can also help you with maintaining a healthy weight (increasing or decreasing) and provide a full dietary analysis to measure dietary adequacy. Please call to make an appointment (02) 9487 9581.

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