

Glycaemic Index and Diabetes

Information for patients



This booklet gives information on the glycaemic index (GI) of some common foods and meals.

What are carbohydrates?

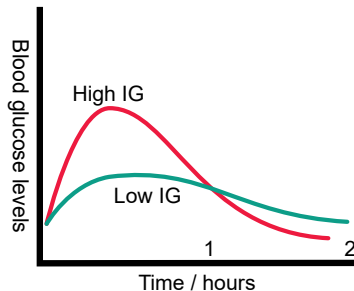
Carbohydrate is a nutrient that our bodies use for energy. The only way our bodies can use this nutrient is to break it down to glucose. Foods that contain carbohydrate, therefore, will affect your blood glucose levels. You need enough carbohydrate for energy but large portions may make your blood glucose levels rise too high.

Carbohydrates are found in starchy foods such as bread, cereals, rice, pasta, chapattis, potatoes, sweet potatoes, fufu and yams. They are also found in fruit, fruit juice, milk, yoghurts, sweets, cakes, biscuits and sugary drinks.

What is the glycaemic index?

Some carbohydrates are digested more slowly than others. We call these slowly digested carbohydrates 'lower glycaemic index' or 'lower GI'.

The diagram below shows how the GI of a food affects your blood glucose levels:



Why are lower GI foods helpful in diabetes management?

The **amount** of carbohydrate you eat at each meal or snack will affect your blood glucose level; the more you eat, the higher your blood glucose will increase. Changing to lower GI foods can, however, help reduce the peak in your blood glucose level after you eat.

Lower GI choices can help lower your HbA1c (average blood glucose level) if you have diabetes. If you have type 2 or gestational diabetes, it may be useful to discuss suitable carbohydrate portion sizes with your dietitian.

A useful tip to remember the benefits of low GI choices is that 'low means slow'. Lower GI choices can also help to reduce hunger between meals.

It is important to remember that lower GI foods are not always healthier. For example, chocolate and cake are lower GI but are high in sugar and fat, and may contribute to tooth decay and unwanted weight gain if eaten in excess.

Higher GI foods and drinks are digested more quickly. They cause a rapid rise in blood glucose so they are useful for treating hypos (hypoglycaemia) in people who are at risk of hypos i.e. on insulin or certain diabetes medications. Examples of higher GI foods and drinks include Lucozade, jelly sweets and glucose tablets.

If you are already following a specific diet advised by a health professional (including food safety advice during pregnancy), stick to what you have been advised and discuss any concerns with your doctor or a dietitian.

Naturally lower GI foods

Food	Examples
Breads	Pitta (white or brown), seeded, Granary, rye, chapatti
Breakfast cereals	Oats (especially porridge made with whole rolled jumbo oats), some wholegrain cereals e.g. All Bran, muesli, sultana bran (and supermarkets own version)
Pulses	All pulses, tinned or dried e.g. lentils, chickpeas, kidney beans, baked beans, mushy peas
Pasta and grains	Pasta - white or wholemeal (not overcooked), noodles Grains - basmati rice (white or brown), couscous, quinoa (pronounced 'keen-waa'), pearl barley
Potatoes	New potatoes, sweet potatoes, yams
Dairy	Milk, yoghurt, milk puddings, ice-cream
Fruit	Most fruit especially those with skin which you eat, dried fruit

Tips

- Avoid over-cooking pasta
- Try using pearl barley to make a filling, economic risotto
- Add a tablespoon of barley to homemade soups and stews
- Porridge made with whole jumbo oat flakes has a lower GI than instant porridge

- Adding a moderate amount of protein foods such as meat, fish, eggs, cheese, pulses, beans, nuts or Quorn to a meal will lower the glycaemic index of the meal

Healthy lower GI meal ideas

Breakfast

- Lower GI toast with cheese or egg or peanut butter
- Beans on lower GI toast
- Porridge or lower GI cereals (see page 3 for examples) with milk or yoghurt
- Grilled bacon sandwich made with lower GI bread
- Eggy bread (French toast)
- Fruit and yoghurt

Lunches and evening meals

- Soup - especially soups containing pulses e.g. lentil soup, Scotch broth, pea and ham
- Sandwich made with seeded, Granary or pitta bread with hummus, cheese, lean meat, or tuna and salad
- Rye crispbread with cottage cheese or low fat soft cheese and salad
- New potatoes with lean meat, poultry, fish or Quorn and vegetables or salad
- Baked sweet potato with beans, cheese and salad
- Chapatti and curry
- Couscous or quinoa with pulses, meat or fish and vegetables or salad

- Sweet potato or new potato wedges with lean meat, poultry, fish or Quorn, and vegetables and salad
- Plantain and cassava with lean meat, poultry, fish or Quorn and vegetables, or made into a stew

Desserts

- Milk puddings e.g. rice pudding
- Fresh fruit
- Yoghurt
- Fruit crumble with oat topping
- Ice cream with fruit
- Bananas and custard

Snacks

- Most fruits except for some melons
- Yoghurt
- Tortilla chips or plain popcorn
- Oatcakes
- Hummus with raw vegetable sticks
- Rye crisp bread with low fat cheese spread, hummus or yeast extract
- Nuts (nuts are high in calories; therefore, you may need to limit the portion size if trying to lose weight)

Some meals have a lower GI because of their high fat or protein content and may be less healthy if eaten too frequently. Examples include: pizza, fish and chips and take-aways.

Managing insulin for very low GI meals

Adding protein or fat lowers the GI of a meal. If you use an insulin pump, try using an extended bolus when you have a very low GI meal, particularly a meal which is very high in protein or fat. You may wish to discuss this with your diabetes dietitian or diabetes specialist nurse.

If you are on a multiple daily insulin injection regimen, you may wish to discuss managing very low GI meals with your diabetes care team.

Further information

University of Sydney glycaemic index database

www.glycemicindex.com

Diabetes UK website

www.diabetes.org.uk/Guide-to-diabetes/Managing-your-diabetes/Glycaemic-Index-GI/

Collins Gem - GI: How to succeed using the Glycemic Index diet, ISBN: 0007211392

Dietitian

Contact
Number

