

Patient information

Dietary guidelines for reactive hypoglycaemia

Hypoglycaemia (or “hypo”) means “low blood sugar”. Generally, a blood sugar level below 4.0 mmol/L is considered a low blood sugar. Reactive hypoglycaemia is a condition where low blood sugar occurs between 2 - 5 hours after eating. This tends to happen as a result of excessive insulin secretion in response to eating or drinking large amounts of carbohydrates.

Insulin is a hormone that is produced by the pancreas. It allows glucose to move from the blood into the body’s cells so they can use the glucose to provide energy. It is not yet clear why reactive hypoglycaemia happens in some people.

Common symptoms:

- Dizziness or feeling lightheaded / faint / weak
- Sweating
- Trembling
- Difficulty concentrating
- Irritability or anxiety
- Fatigue
- Increased appetite or cravings for sweet foods
- Blurred vision
- Rapid heartbeat
- Nausea or vomiting

Dietary changes that may help to prevent or reduce symptoms:

- 1. Follow a balanced diet** and aim to eat a variety of foods every day, including 5-a-day of vegetables and fruit.
- 2. Have 5 - 6 smaller, more frequent meals and snacks** e.g. every 3 hours to prevent your blood sugar from dropping too low, especially on days when you are more active. Activity and movement makes your muscles use up more sugar for energy, which can result in your blood sugar levels dropping faster or more frequently.
- 3. Choose more high-fibre, low glycaemic index (low GI) foods**
 - Add lentils, beans, or pulses (e.g. chickpeas, dried peas) to meals as these are high in fibre and protein as well as having a low GI
 - Add plenty of colourful vegetables to increase fibre content of meals
 - Choose whole-grain or unrefined versions of starchy foods (*see more examples in table on next page*) and avoid “instant” versions of these foods
- 4. Avoid having very large portions of carbohydrates in one meal.**

A portion is generally between 40 - 50g of carbohydrate, which equates to approximately:

 - 2 slices bread + a portion fresh fruit
 - 4 - 5 egg-sized potatoes
 - 4 - 5 tablespoons of cooked rice or pasta
 - a serving of high-fibre cereal with 200ml ($\frac{1}{3}$ pint) milk

Try to keep carbohydrate portions consistent with main meals. Tolerance of carbohydrate portions varies from person to person; you may need to use trial-and-error to determine ideal carbohydrate portions for you.

Nutrition Information tables on products will show you the amount of carbohydrate a food contains per serving or per 100g. Alternatively, use the Carbs & Cals book or app (www.carbsandcals.com).
- 5. Aim to have 15 - 20g carbohydrates as a snack in between meals** to avoid having long periods of time in which your blood sugar could drop. *See next page for examples.*
- 6. Include protein foods at meals and snacks.** Adding protein to meals prevents carbohydrate from being digested too quickly. Examples include poultry, fish, meat,

eggs, cottage cheese, lentils, beans, pulses, dairy, tofu, or Quorn products.

7. **Include a portion of unsaturated fats with your meals.** As with protein, adding fat can help slow down the digestion of carbohydrates to keep blood sugar levels more stable. Examples include nuts or nut butters, vegetable oils or spreads, seeds, avocado, olives and oily fish.
8. **Limit or avoid alcohol** as alcohol can cause hypoglycaemia. You might be able to tolerate small amounts of alcohol occasionally. If having alcoholic drinks, have these with a meal rather than on an empty stomach and don't exceed the national guidance of 14 units per week. Use sugar-free mixers, if any.
9. **Limit or avoid foods and drinks high in added- or free sugar, for example:**
 - Fizzy drinks, fruit juices, cordials, or squash: rather choose sugar-free options.
 - Sweets, cakes, chocolates, puddings, jam, honey, etc. Include small portions of these occasionally and always together with meals or low-GI snacks.
10. **Limit or avoid caffeine** if it worsens your symptoms – this includes coffee, tea, energy drinks and chocolate. Choose decaf or caffeine-free options or only have a small portion occasionally with a meal.

It may be helpful for you to keep a food-and-symptom diary for several days to determine which foods trigger your symptoms.

Examples of low-GI, high-fibre starches:

Bread	Multigrain, granary, rye, seeded, oat, wholegrain, pita bread, or chapatti
Potatoes	New potatoes in their skin, sweet potato, or yam
Pasta	Cooked <i>al dente</i> , whole-wheat pasta
Rice	Basmati, long grain, or brown rice
Other grains	Bulgur wheat, barley, couscous, and quinoa
Cereals	Porridge (not instant), muesli, most oat or bran-based cereals (choose no-added sugar options)
<i>Optional: cooking and cooling can lower the glycaemic index of some starchy foods. You might want to consider pre-cooking your starches, cooling them in the fridge overnight, and re-heating them for your meals the following day.</i>	

If these dietary measures do not work, please contact the doctor or medical team that diagnosed you as you may need to be prescribed medication.

Treating a hypo

When you experience the symptoms of hypoglycaemia, do the following:

1. Test your blood sugar to confirm whether it is a hypo (<4 mmol/l)
2. Have 15 - 20g fast-acting carbohydrates, for example one of the following:
3. 200mls pure fruit juice or fizzy drink (non-diet)
 - 4 - 5 jelly babies
 - 5 - 6 dextrose tablets or 4 - 5 glucose tablets
 - 1.5 - 2 tubes GlucoGel / DextroGel
4. Wait 10 - 15 minutes
5. Test again.
6. If your blood sugar is still below 4mmol/l, repeat steps 2 - 4
7. Once your blood sugar is above 4mmol/l, you may need a 15 - 20g slow-release carbohydrate snack, especially if your meal is more than 2 hours away. Otherwise eat your next meal.

Examples of 15 - 20g slow-release carbohydrate snacks:

- 1 slice whole-grain bread
- 2 digestive biscuits
- 1 portion fresh fruit (80g fresh fruit)
- 250ml milk or yoghurt
- 3 - 4 oatcakes

Examples of meals and snacks for a day:

Breakfast examples (aim for 40 - 50g carbohydrate)	<ul style="list-style-type: none">- Whole-grain bread with cheese or eggs- Oats porridge with nuts and berries- No-added sugar muesli with natural yoghurt- Greek yoghurt with fresh fruit
Lunch examples (aim for 40 - 50g carbohydrate)	<ul style="list-style-type: none">- Baked potato with baked beans and salad- Whole-meal pasta salad with chicken or prawns- Tuna and cucumber whole-grain sandwich- Whole-meal chicken wrap
Dinner examples (aim for 40 - 50g carbohydrate)	<ul style="list-style-type: none">- Spaghetti bolognaise with vegetables or salad

<i>carbohydrate)</i>	<ul style="list-style-type: none"> - Chilli con carne with red kidney beans and basmati rice - Shepherd's pie with vegetables or salad - Grilled salmon with brown rice and vegetables - Roast dinner
<p>Snack examples - choose one option e.g. 2 hours after a main meal</p> <p><i>(aim for 15 - 20g carbohydrate)</i></p>	<ul style="list-style-type: none"> - Fresh fruit + handful mixed nuts - Small pot of natural or Greek yoghurt - Vegetable sticks with hummus and breadstick - Oatcakes with cheese or ham - Whole-grain bread with topping <i>(avoid jam / honey / chocolate spread)</i> - Milk - Digestive biscuits

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