

## Reactive Hypoglycaemia

### What is reactive hypoglycaemia?

Reactive hypoglycaemia is a condition that results in episodes of low blood glucose levels after eating. These episodes usually occur 2-4 hours after a meal. It's thought that reactive hypoglycaemia is caused by the over-production of the hormone insulin (which lowers blood glucose levels) by the pancreas following a meal that is high in carbohydrates. The cause of reactive hypoglycaemia is unclear.

### What are the symptoms?

Some common symptoms include:

- Fatigue
- Dizziness or light-headedness
- Sweating
- Irritability or anxiety
- Cravings for sweet foods
- Increase in appetite (some describe an incurable hunger)
- Increase in heart beat

### What to do if you have symptoms of reactive hypoglycaemia (blood glucose levels of less than 4mmol/L):

A 15-20g portion of quick-acting glucose should be consumed to increase your blood glucose levels. Some examples include:

- A sugary (non-diet) drink; For example, 150mls Cola Original
- Lucozade Energy \*(see below)
- Glucose tablets; For example, 4-5 GlucoTabs
- Sweets; For example, 3-4 Bassetts Jelly Babies

When blood glucose has returned to normal, follow this treatment with a snack containing 15–20g of slower-acting carbohydrate to prevent blood glucose dropping again. This snack could be a sandwich, piece of fruit, cereal or some biscuits and milk – or even your next meal, if it's due.

**\*Please note: check the label of sugary foods and drinks as some will soon contain less sugar. For example, the sugar content of Lucozade Energy Original was reduced by 50% in April 2017 (now providing around 8.9g per 100ml), therefore you will now require 200ml to treat hypoglycemia.**

### How can you prevent episodes of reactive hypoglycaemia?

Generally diet is the best form of prevention. The following dietary changes may be helpful to relieve the symptoms associated with reactive hypoglycaemia:

- **Ensure a balanced diet is consumed**
  - ✓ Include a variety of foods and aim for 5 portions of fruits and vegetables per day, of a variety of colours.

- ✓ Include small amounts of unsaturated fats such as olive oil, nuts and seeds, avocado and oily fish, with your meals and snacks. These will slow down the digestion of carbohydrate to reduce the risk of reactive hypoglycaemia. They are also a more heart protective way to consume fats in the diet.
- **Eat little and often**  
Eating regularly throughout the day, for example 5-6 small meals and snacks, helps regulate the amount of glucose in your bloodstream. This may be particularly important when being physically active.
- **Avoid large portions of starchy carbohydrates**  
These include potatoes, pasta, bread and rice. Spreading these types of foods out throughout the day will help to reduce the risk of reactive hypoglycaemia.
- **Choose low glycaemic index (GI) foods**  
Carbohydrate foods that have a low GI (*see our department's GI diet sheet for further detail*) take longer to digest, which means the glucose is released at a slower rate. Low GI foods are often higher in fibre too. Examples include; most fruit, porridge, milk and yoghurts (preferably low fat), beans, lentils and pulses, sweet potato, pasta, wholegrains such as granary breads and brown or basmati rice.

### Low GI / protein rich meal suggestions:

- ✓ porridge with nuts and berries
- ✓ granary toast with poached egg/grilled bacon
- ✓ baked sweet potato and baked beans
- ✓ lentil and bean soup
- ✓ sandwich using seeded bread/wholegrain pitta
- ✓ meat/fish/tofu and vegetable stir-fry with wholegrain noodles
- ✓ chilli con carne containing red kidney beans (or vegetarian alternative) served with wholegrain/basmati rice
- ✓ pasta in a tomato-based sauce and grated cheese
- ✓ grilled fish/meat with boiled new potatoes and vegetables

### Low GI / protein rich snack suggestions:

- ✓ 1 portion of fruit
- ✓ small pot yoghurt (normally around 125g)
- ✓ couple of oatcakes with cheese/ hummus/ peanut butter
- ✓ handful dried fruit and nuts
- ✓ 1-2 rich tea / digestive biscuits

- **Have a source of lean protein at each meal and snack**  
Good protein sources include meat, poultry, fish, eggs, tofu, beans, lentils, nuts and also dairy foods. Combining protein with carbohydrates (e.g. egg on toast) helps to slow down the rate of digestion, so having protein with each meal and snack can give a longer-lasting source of energy and reduce the risk of reactive hypoglycaemia.
- **Limit caffeine/alcohol if these make your symptoms worse**  
Choose decaffeinated versions of tea, coffee and diet/sugar-free carbonated drinks. Don't drink alcohol on an empty stomach, and stick to safe limits (no more than 14 units per week, spread out over at least 3 days).
- **Avoid 'added sugars'**  
Minimising intake of added sugars in foods and drinks will help to prevent a rapid increase in blood glucose levels. A rapid rise in blood glucose could result in an

excessive amount of insulin being produced by the body, and a subsequent rapid fall in blood glucose therefore triggering reactive hypoglycaemia. Food and drinks high in 'added sugars' include:

#### **Avoid**

- Non-diet carbonated drinks / Energy drinks
- Cordials
- Sweetened fruit juices
- 'Frappuccino' style coffees
- Sweets
- Adding sugar to foods and drinks

#### **Eat occasionally**

- Cakes, chocolate, biscuits
- Frosted corn flakes
- Tomato Ketchup
- Sweet condiments, such as jams
- Unsweetened fruit juices and smoothies

**If you continue to experience frequent episodes of reactive hypoglycaemia despite following the above dietary recommendations, please make arrangements to be reviewed by your GP or Consultant.**

If you have any queries about your diet please contact your Dietitian:

Name: .....

Tel: .....

### **Important information**

This patient information is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

### **Your comments**

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: (01323) 417400 Ext: 5860 or by email at: [esh-tr.patientexperience@nhs.net](mailto:esh-tr.patientexperience@nhs.net)

### **Hand hygiene**

The trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

### **Other formats**

**If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.**

**Tel: (01424) 755255 Ext: 2620**

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

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## Reference

The Clinical Specialty/Unit that have agreed this patient information leaflet:  
The Nutrition and Dietetics Department and the Diabetes Department

Next review date: January 2021  
Responsible clinician/author: Lauren Clifton, Dietitian  
Josie Townsend, Lead Diabetes Specialist Dietitian

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