

Hypoglycaemia

Information and advice for people with diabetes

Diabetes, endocrinology and lipid metabolism

What is hypoglycaemia?

Hypoglycaemia, also known as a 'hypo', is where your blood glucose levels are low (below 4.0mmol/L). This means that the supply of glucose to your brain falls, resulting in symptoms because the brain relies on glucose in the blood to function normally.

What causes hypoglycaemia?

Hypoglycaemia can be caused by:

- Taking a higher dose of insulin or other medicines than usual
- Doing unplanned exercise or being more active than normal
- Recent change to your diet, such as reducing the amount of carbohydrate in a meal or fasting/missing a meal (especially if you have taken your tablets or insulin)
- Drinking large amounts of alcohol
- Stress or illness

People who take insulin are at a higher risk of hypoglycaemia than those who take tablets for their diabetes because insulin lowers blood glucose more quickly.

What are the symptoms of hypoglycaemia?

The early symptoms of hypoglycaemia include:

- Feeling shaky
- Dizziness
- Sweating even when it is not warm
- Hunger
- Weakness
- Fast heart beat or palpitations

If hypoglycaemia isn't treated when the early symptoms appear, you could then experience the following symptoms:

- Confusion
- Headache
- Difficulty concentrating
- Change in behaviour e.g. becoming aggressive or tearful
- Drowsiness
- Fitting (or seizures), even if you don't have epilepsy
- Becoming unconscious

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How is hypoglycaemia diagnosed?

Hypoglycaemia is diagnosed by testing the level of glucose in the blood using a blood glucose meter.

How is hypoglycaemia treated?

You can treat mild to moderate hypoglycaemia yourself. If you feel unwell and have any of the early symptoms of hypoglycaemia you should check your blood glucose level. If it is below 4mmol/L you should take 15-20g of a short-acting carbohydrate. This is the equivalent of one of the following:

- 5 – 7 glucose tablets
- 120mls lucozade
- 200 ml pure smooth orange juice
- 150 ml coke (not diet)
- 20g glucose gel (2 x 10g tubes)

You should then check your blood glucose level after 10 minutes and take more glucose until your blood glucose level is more than 4mmol/L or the symptoms have improved.

Once your blood glucose levels are above 4mmol/l and symptoms have resolved you should eat some starchy carbohydrate such as toast, biscuits, a cereal bar or fruit. This will slowly release carbohydrate and maintain your blood sugar once the effects of the shorter acting carbohydrates have gone.

What are the benefits of this treatment?

This treatment can raise your blood glucose level to bring it back to normal, which will improve your symptoms.

What are the risks of the treatment?

In many cases the blood glucose levels may get over-corrected, but there are no risks associated with this.

Are there any alternatives to this treatment?

If you have severe hypoglycaemia this needs emergency treatment with an injection of the hormone glucagon which raises the blood glucose level quickly; this can be given by a paramedic. Some people may be advised to carry glucagon injections with them and the diabetes team will teach family members or friends how to give them.

In hospital, severe hypoglycaemia is often treated by giving glucose directly into your bloodstream through a drip into one of your veins.

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What are the risks of not getting treatment?

If you do not have treatment for hypoglycaemia and your blood glucose levels continue to drop you will develop more severe symptoms which could cause you to fit and become unconscious. This could result in permanent brain damage.

How can hypoglycaemia be prevented?

There are several steps you can take to reduce the risk hypoglycaemia:

- 1. Talk to your diabetes nurse or doctor about your diet and lifestyle.** They can help you to alter/plan your medications, diet and activity to reduce the risk of hypoglycaemia.
- 2. Don't change your diet or level of exercise suddenly** without discussing this with your doctor or nurse and altering your treatment appropriately.
- 3. Test your blood glucose level regularly,** especially if you are taking insulin, so that you can identify when your blood glucose is low and see if there is any pattern to this. You can then discuss this with your doctor or nurse.
- 4. Only drink alcohol in moderation.** Women should not drink more than 2 units of alcohol a day and men should not drink more than 3 units. Always eat before drinking alcohol and have a snack before sleeping. You should also have days where you don't drink any alcohol.

Other important information

It is important that you make your family and friends aware of your diabetes and the risk of hypoglycaemia and make sure they know what to do if it happens. It's also a good idea to carry an identification card or wear medical alert jewellery that states you have diabetes.

If you drive a vehicle you are legally required to inform the DVLA that you have diabetes if you take insulin and/or you have experienced hypoglycaemia whilst driving. Always check your blood glucose before driving and keep treatment and snacks with you at all times.

Contact details

If you have any questions or concerns please speak to your GP or contact your local diabetes centre (Monday – Friday, 9am – 5pm):

City Hospital Diabetes Centre

0121 507 6006

Sandwell Hospital Diabetes Centre

0121 507 3063

Outside of normal working hours please go to your local Urgent Care Centre for advice, or in an emergency go your local A&E.

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Further information

There are more information leaflets about diabetes available in the diabetes centres and you can also find more information from Diabetes UK.

Diabetes UK

www.diabetes.org.uk

Helpline: 0845 120 2960 (Monday – Friday, 9am – 5pm)

DVLA (Medical information)

www.dft.gov.uk/dvla.medical

Contact centre: 0300 790 6806

Monday – Friday, 8am – 5.30pm and Saturday 8am – 1pm

For more information about our hospitals and services please see our website:

Sandwell and West Birmingham Hospitals NHS Trust

www.swbh.nhs.uk

Sources used for the information in this leaflet

- National Institute for Health and Clinical Excellence, CG15 'Type 1 diabetes: Diagnosis and management of type 1 diabetes in children, young people and adults', issued July 2004, most recently updated October 2011
- Textbook of Diabetes second edition, chapter 40 'Hypoglycaemia in Diabetes Mellitus', 1997
- New England Journal of Medicine, 'Hypoglycaemic Disorders', April 1995

If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5420 or email: swb-tr.swbh-gm-patient-information@nhs.net



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