

Hypoglycaemia

Information and advice for people with diabetes

Diabetes

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.

What causes hypoglycaemia?

Hypoglycaemia can be caused by:

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

People who take insulin for their diabetes 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 mild to moderate symptoms of hypoglycaemia include:

- Feeling shaky
- Dizziness
- Sweating even when it is not warm
- Hunger
- Weakness
- Fast heart beat or palpitations
- Confusion
- Headache
- Difficulty concentrating
- Change in behaviour e.g. becoming aggressive or tearful
- Drowsiness

If hypoglycaemia is not treated when the above symptoms appear, you could then experience these severe symptoms:

- Fitting (or seizures), even if you do not have epilepsy
- Becoming unconscious

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How is hypoglycaemia diagnosed?

You can diagnose hypoglycaemia by testing the level of glucose in the blood using a blood glucose meter.

How is hypoglycaemia treated?

Treating mild to moderate symptoms

You can treat mild to moderate symptoms of hypoglycaemia yourself. If you feel unwell and have any of the early symptoms of hypoglycaemia you should check your blood glucose level:

1. Check your blood glucose. If it is below 4mmol/L you should take 15-20g of a short-acting carbohydrate and make a note of what time you took this. This is the equivalent of one of the following:
 - 5 – 7 glucose tablets
 - 120ml Lucozade
 - 200 ml pure smooth orange juice
 - 150 ml cola (not diet)
 - 20g glucose gel (2 x 10g tubes)
2. You should then check your blood glucose level after 10-15 minutes. If your blood sugar level is still below 4mmol/L take 15-20g more glucose.
3. If, after another 10-15 minutes after doing step 2, your blood sugar levels are still below 4mmol/L, you should go to the Emergency department (ED).

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.

Treating severe symptoms

If you have severe symptoms of 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 and/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.

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.

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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.

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:

- Talk to your diabetes nurse or doctor about your diet and lifestyle. They can help you to alter and plan your medications, diet and activity to reduce the risk of hypoglycaemia.
- Do not change your diet or level of exercise suddenly without discussing this with your doctor or nurse and altering your treatment appropriately.
- Test your blood glucose level regularly (especially if you are taking insulin). This is 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.
- 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. If you are going to drink, always eat before drinking alcohol and have a snack before sleeping. You should also have days where you do not drink any alcohol.

Other important information

- It is important that you make your family and friends aware of your diabetes, 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 2 episodes of hypoglycaemia within the last 12 months where you were completely dependent on another person to treat your hypo.
- Always check your blood glucose before driving. If it is below 5mmol/L, eat 45 minutes before driving. Keep treatment and snacks with you at all times.

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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 Emergency Department (ED).

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 websites www.swbh.nhs.uk and www.swbhengage.com, follow us on Twitter @SWBHnhs and like us on Facebook www.facebook.com/SWBHnhs.

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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 5495 or email: swb-tr.swbh-gm-patient-information@nhs.net



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