

Managing hypoglycaemia

Hypoglycaemia, also known as a hypo, occurs in people with diabetes when their blood glucose level drops below 4mmol/L. Hypos can occur in people with diabetes who take insulin or other types of glucose-lowering medications.

What are the main causes of a hypo?

Hypos can be caused by one or more of the following:

- » too much insulin or other glucose-lowering medication
- » Injecting insulin into skin that has lumps from repeatedly injecting into the same area (called lipohypertrophy)
- » delaying or missing a meal
- » not eating enough carbohydrate foods
- » unplanned physical activity
- » more strenuous exercise than usual
- » drinking too much alcohol
- » drinking alcohol without eating enough carbohydrate food.



What are the symptoms of a hypo?

While symptoms vary from person to person, common feelings are:

- » weakness, trembling or shaking
- » sweating
- » lightheadedness or dizziness
- » headache
- » lack of concentration or behaviour change
- » tearfulness or crying
- » irritability
- » hunger
- » numbness around the lips and fingers
- » a fast heartbeat
- » blurred vision.

If you feel any of these symptoms, check your blood glucose level. If you can't do this, treat these symptoms as if you are having a hypo.

How is a hypo treated?

It's important to treat a hypo quickly to stop your blood glucose level from falling even lower. Untreated hypos can be dangerous and can put you at risk of becoming unconscious.

The first thing to do is to be sure you are safe. For example, if you are driving a vehicle, pull over to the side of the road.

STEP 1 – Most important!

Have some easily absorbed carbohydrate (that you find easy to swallow) such as:

- » glucose tablets equal to 15g of carbohydrate **OR**
- » 6–7 regular jellybeans or 4 large glucose jellybeans **OR**
- » 1 tube of oral glucose gel (equal to 15g of carbohydrate) **OR**
- » 1/2 a can (150mL) of regular (not ‘diet’) soft drink **OR**
- » 100mL of Lucozade® **OR**
- » 3 teaspoons of sugar or honey **OR**
- » 1/2 a glass (125mL) of fruit juice.

After 10–15 minutes, recheck your blood glucose level to make sure it has risen above 4mmol/L. If it hasn't, repeat step 1.

If you are taking diabetes medication that can cause hypos in combination with a medication called acarbose (Glucobay®), you must treat the hypo with pure glucose such as glucose tablets, glucose gel or Lucozade®.

**STEP 2**

Once your blood glucose level is above 4mmol/L, you will need to eat some extra carbohydrate. If your next meal is more than 20 minutes away, eat some carbohydrate food such as:

- » 1 slice of bread **OR**
- » 1 glass (250mL) of milk or soy milk **OR**
- » 1 piece of fruit **OR**
- » 4 dried apricots **OR**
- » 1 tablespoon sultanas **OR**
- » 1 small tub (100g) fruit yoghurt.

For individualised advice on hypo treatment, talk to your doctor or diabetes health professional.

Insulin pumps and continuous glucose monitoring (CGM): if you are using an insulin pump or CGM, talk to your diabetes health professionals about how to treat and manage hypos.

What happens if a hypo is not treated?

If left untreated, blood glucose levels will continue to drop, and this may lead to a severe hypoglycaemia (unconsciousness or seizures). A severe hypo is one that you can't treat yourself and where you need help from someone else. It's important that your family and friends know you have diabetes and what to do in case of a severe hypo.

Your doctor or diabetes educator may recommend you always carry glucagon with you in case of a severe hypo. You or your diabetes health professionals can show your family or friends how to use it. Glucagon is a hormone, given by injection that raises the blood glucose level.

If you have experienced a severe hypo, notify your doctor as soon as possible to discuss the cause of the hypo and to review your diabetes management plan. You can also discuss when you should return to your normal activities, such as driving.

What to do if the person is unconscious, drowsy or unable to swallow

THIS IS AN EMERGENCY! Do not give any food or drink by mouth.

- » Place the person on their side and make sure their airway is clear.
- » Give an injection of glucagon if available and if you are trained to give it.
- » Phone for an ambulance (dial 000) and explain that the person is unconscious and has diabetes.
- » Wait with the person until the ambulance arrives.

Hypo unawareness

This occurs when people don't feel the early warning symptoms of a hypo and only realise they are having a hypo when their blood glucose levels drop very low or when they check their level.

If you have had diabetes and hypos for many years, the risk of not feeling the symptoms of hypos is more likely. Hypo unawareness can be dangerous because by the time you realise you are having a hypo you may find it hard to treat it and you could become unconscious.

If you have hypos without symptoms, or your symptoms change, you may need to check your blood glucose levels more often. Always treat a hypo when your blood glucose level is less than 4mmol/L, even if you feel fine. If your blood glucose levels are low without any symptoms, you need to discuss this with your doctor or diabetes health professional.

Other things to consider

- » Wear identification that says you have diabetes.
- » Always carry hypo treatment with you.
- » Make a note of any hypos you have so you can discuss these with your doctor or diabetes health professional.
- » It's important not to over-treat hypos, for example, by eating more than the recommended amount of carbohydrate, as this may cause your blood glucose level to rise too high and make it difficult to manage your diabetes.
- » Make sure the people around you – such as your family, friends, co-workers, school staff or carers – know how to recognise and treat hypos.
- » Alcohol can increase the risk of hypos. Make sure you have a meal containing carbohydrate foods before drinking alcohol, or have snacks that contain carbohydrate while drinking. Check your blood glucose level and eat a carbohydrate snack before going to bed. Talk to your doctor or diabetes health professional about alcohol and diabetes.
- » Before driving a motor vehicle, check your blood glucose level using a blood glucose meter and make sure it's above 5 mmol/L. If you have had a hypo it is recommended that you wait at least 30 minutes before driving to ensure you are safe. For more information, refer to the NDSS booklet: *Diabetes and driving*.



The NDSS and you

A wide range of services and support is available through the NDSS to help you manage your diabetes. This includes information on diabetes management through the NDSS Helpline and website. The products, services and education programs available can help you stay on top of your diabetes.

Version 2 Oct 2018. First published June 2016