



Managing Hypoglycaemia

Hypoglycaemia, also known as a *hypo*, occurs in people living with diabetes when their blood glucose level drops below 4mmol/L. Hypos can occur in people living with diabetes who use 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:

- taking too much insulin or other glucoselowering 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
- doing 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
- a headache
- a 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 when it is safe to do so.

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 glass (125ml) of fruit juice

After 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 healthcare team 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

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.

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* Source National Diabetes Services Scheme fact sheet. It is intended as a guide only and should not replace individual medical advice. If you have any concerns about your health or further questions, you should contact your health professional.

