

---

## Hypoglycaemia

---

### Summary

- Symptoms of hypoglycaemia are caused by low blood glucose levels
  - Hypoglycaemia can occur if you take your diabetes medication and then do not eat enough, or if you exercise more than usual.
  - If you experience early mild symptoms, eat or drink fast-acting carbohydrates such as six or seven jellybeans or half a glass of fruit juice.
  - Severe symptoms such as drowsiness, unconsciousness or inability to swallow are a medical emergency.
  - In an emergency, always call triple zero (000) and ask for an ambulance.
- 

Hypoglycaemia (or hypo) is defined as a low blood glucose level of 4.0 mmol/L or less. People especially at risk of hypoglycaemia are those with diabetes who are on insulin or certain diabetes medications.

Being able to pick up early symptoms of hypoglycaemia and treat the low blood glucose straight away helps reduce the chance of having severe hypoglycaemia. Understanding the activities and situations that trigger hypoglycaemia helps those at risk to plan ahead and work out ways to reduce the likelihood of this happening.

It is important to work together with your health care professional (GP, diabetes specialist or diabetes educator) to reduce your risk and frequency of having hypoglycaemia. This will involve regular review of your blood glucose levels and adjusting insulin or other diabetes medications as necessary. They will also develop a management plan for hypoglycaemia and ways to prevent it.

**The information provided in this fact sheet is basic and is not a replacement for education by your health care professional about hypoglycaemia and its management. You need to have a hypoglycaemia management plan in place that has been developed by you and your health care professional. Regular follow-up with your health care professional for blood glucose and medication review is important.**

### What is hypoglycaemia?

Hypoglycaemia means low blood glucose or not having enough glucose in the blood. A low blood glucose level is usually 4.0mmol/L or less. In frail older people a low blood glucose level may be under 6.0mmol/L (according to the McKellar guidelines). Hypoglycaemia is sometimes referred to as 'a hypo'.

Hypoglycaemia can be classified as mild or severe.

### Who is at risk of hypoglycaemia?

People with diabetes who inject insulin or are on certain diabetes tablets (sulphonylureas) are particularly at risk of low blood glucose.

There are other medical conditions that may cause a person to produce too much insulin and people can experience symptoms of low blood glucose levels even when they do not take insulin or certain diabetes medications. It is important to have this investigated by your doctor.

### Causes of hypoglycaemia

Various activities or actions can cause blood glucose levels to go too low in people with diabetes. The most common reasons are the person has:

- taken too much insulin or medication
  - done more exercise or more intense exercise than usual
  - missed a meal or not had enough carbohydrate
  - lost weight and no longer needs the same insulin or medication dose.
-

## Symptoms of mild hypoglycaemia

The most common early warning signs of hypoglycaemia are:

- sweating
- feeling shaky
- fast heart beat
- sudden hunger
- headache.

Don't ignore hypoglycaemia symptoms. Treat symptoms immediately so your blood glucose level does not continue to drop.

## Treatment for mild hypoglycaemia

In cases of mild hypoglycaemia the person can treat themselves (Young children or people being cared for by others may need assistance).

If the person's blood glucose level is 4.0mmol/L or less and they are conscious and able to swallow, the following steps apply.

### Step 1

Take 15–20 grams of glucose such as:

- 6 or 7 regular size jelly beans, or
- 100–120 ml ( $\frac{1}{2}$  standard cup) Lucozade Energy drink (not Sport), or
- 150 – 200 ml soft drink or fruit juice (1 standard cup), or
- 15 grams of glucose gel, or
- 3 teaspoons of sugar or honey.

Re-check your blood glucose in 15 minutes.

### Step 2

If your blood glucose level is still 4.0mmol/L or less, repeat step 1 and recheck your blood glucose in 15 minutes.

### Step 3

Once your blood glucose is above 4.0mmol/L:

- if your next meal is more than an hour away, have a snack containing carbohydrate such as a piece of fruit, a slice of bread, dry biscuits, a glass of milk or a small tub of low-fat yogurt
- if it is time for a meal, make sure that it contains some carbohydrate.

This will help maintain your blood glucose level.

After you have treated your hypoglycaemic episode your blood glucose needs checking more often (When someone has had a hypoglycaemic episode they are more likely to have another one). Checking your blood glucose level more often will help you know if your blood glucose level is dropping again.

## Symptoms of severe hypoglycaemia

Severe hypoglycaemia occurs when the brain is not getting enough glucose to function properly. Symptoms of severe hypoglycaemia include:

- inability to think clearly
- inability to follow instructions
- confusion
- slurred speech
- appearing drunk

- fitting (having a seizure)
- becoming unconscious.

### **Treatment for severe (or unconscious) hypoglycaemia**

In cases of severe hypoglycaemia the person cannot treat themselves, and needs the help of someone else. Call 000 for an ambulance immediately.

If the person can't swallow or follow instructions do not give them any treatment by mouth. If you are trained in how to prepare and inject glucagon (or how to use it yourself) and feel comfortable injecting it, then this can be administered. Ambulance paramedics have the resources to manage severe hypoglycaemia.

### **Glucagon for hypoglycaemia**

Sometimes a person living with diabetes who is at high risk for hypoglycaemia may have a glucagon hypokit on hand. This is given as an injection and helps release stored glucose in the body, which helps to increase blood glucose levels.

A glucagon hypokit is used when a person has a severe or unconscious hypoglycaemic episode and cannot have treatment by mouth. A support person needs to be trained in how to prepare and inject glucagon. Ambulance officers are able to treat this type of hypoglycaemia and it is best to call them for assistance.

After a severe hypoglycaemic episode, once the person is conscious and able to swallow, it is important to replace their used-up energy stores. They will need both quick acting glucose (such as fruit juice or soft drink) and longer acting carbohydrate (such as a sandwich or yogurt or glass of milk).

### **Further tips after a hypoglycaemic episode**

- Don't exercise for the rest of the day after a severe hypoglycaemic episode.
- Try and work out why you became hypoglycaemic.
  - Did you do more exercise or more intense exercise than usual?
  - Did you forget that you had taken insulin or diabetes tablets, and take another dose?
  - Did you inject into a new area or an area that heated up with exercise and absorbed more quickly?
  - Was there not enough carbohydrate in your last meal?
  - Is there a particular time of day that hypoglycaemia occurs for you?
- Tell your doctor and diabetes educator that you have had hypoglycaemia, especially if it was severe or is increasing in frequency, as your insulin or diabetes medication may need to be adjusted.
- Wear or carry some form of identification, such as a MedicAlert medical ID, to indicate that you have diabetes and are taking insulin or sulphonylureas.

### **What if I don't get any signs that I have hypoglycaemia?**

Sometimes people become unable to recognise symptoms of hypoglycaemia and find it difficult to tell if their blood glucose might be low. This may be because a person has:

- had diabetes for a long time
- had too many recent episodes of hypoglycaemia
- not treated their hypoglycaemia correctly
- ignored early warning signs of hypoglycaemia.

It is possible to regain the ability to recognise symptoms of hypoglycaemia. Talk with your diabetes specialist or diabetes educator for advice and support.

### **Driving and diabetes**

Always check your blood glucose level before driving. It is recommended that you have a blood glucose level of above 5.0mmol/L to drive.

If your blood glucose becomes low while you are driving, pull over straight away, and put the hazard lights on. Turn the car off and remove the keys from the ignition.

Check your blood glucose level if possible and treat your hypoglycaemia. If your blood glucose level is above 4.0mmol/L but under 5.0mmol/L and you are at risk of hypoglycaemia, have a snack.

Vic Roads has more [information about driving and diabetes](#).

**This page has been produced in consultation with and approved by:**

Diabetes Australia Victoria

Content on this website is provided for information purposes only. Information about a therapy, service, product or treatment does not in any way endorse or support such therapy, service, product or treatment and is not intended to replace advice from your doctor or other registered health professional. The information and materials contained on this website are not intended to constitute a comprehensive guide concerning all aspects of the therapy, product or treatment described on the website. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions and to ascertain whether the particular therapy, service, product or treatment described on the website is suitable in their circumstances. The State of Victoria and the Department of Health & Human Services shall not bear any liability for reliance by any user on the materials contained on this website.

For the latest updates and more information, visit [www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)

**Copyright © 1999/2019** State of Victoria. Reproduced from the Better Health Channel ([www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.