

# help with 'hypos'



Low  
glucose





# Acknowledgments

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# Who is this booklet for?

This booklet is for people with diabetes who want to know more about staying in control of their condition and getting on with their lives.

This booklet provides a quick guide to help you recognise when your blood glucose levels are too low and what action to take. Friends and family may also find this booklet useful in helping you manage your diabetes.

If you need more information, or have any worries, your nurse or doctor will be happy to help.

This booklet is one of a series of information booklets and leaflets provided by Novo Nordisk to people with diabetes.

Other titles in the series are:

For adults with diabetes:

- diabetes monitoring diary
- looking after yourself
- type 1 diabetes
- type 2 diabetes
- gestational diabetes
- travelling with diabetes
- your feet and diabetes

For children with diabetes:

- Pete the pancreas for parents
- Pete the pancreas for children
- Pete the pancreas for carers
- Pete the pancreas children's diary

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# What is a 'hypo'?

- 'Hypo' is short for **hypoglycaemia**
- Hypoglycaemia is the medical term **for low blood glucose levels**
- It occurs when blood glucose levels fall below 4.0 mmol/L irrespective of whether or not you have symptoms.



**'Glucose' and 'sugar' mean the same thing - they are used interchangeably when talking about diabetes care.**

## Why do 'hypos' occur?

Maintaining your blood glucose level is a balance between the glucose you take in from food, the glucose used to make energy and the glucose stored in your body.

In managing your diabetes you will focus a lot on keeping your blood glucose levels from getting too high. However, if your blood glucose levels go too low this can also be a problem.

Hypoglycaemia or a 'hypo' is the term used for what happens when your blood glucose levels go too low.



PATRICIA GUIMARAES  
Portugal  
Patricia has type 1 diabetes

**Hypoglycaemia or a 'hypo' is the term for what happens when your blood glucose levels drop too low.**

# What can cause a 'hypo'?

'Hypos' can have a number of causes:

- Delayed or missed meals / snacks or not eating enough
- Exercising more than usual, e.g.
  - Cleaning the house
  - Gardening
  - Dancing
- A 'hypo' may occur anytime up to 24 hrs after vigorous exercise
- If on insulin treatment:
  - Inaccurate dosing of insulin
  - Taking too much insulin
  - Poor injection technique
  - Not resuspending (mixing) pre-mixed insulins properly
- Some tablets for diabetes
- Alcohol - particularly the 'morning after'
- Hot weather
- Vomiting just after a meal
- Breast feeding.



NEIL HUMPHRIES  
UK  
Neil has type 1 diabetes



# What does a 'hypo' feel like?

- The way you feel when your blood glucose level is low varies from person to person and may not be the same every time
- You will soon learn to recognise your own early warning signs and how to take action
- For example, you may feel:



• Dizzy



• Sweaty



• Hungry



• Cold



• Faint



• Tired



• Confused



• Irritable

- 'Hypos' can be divided into two types:
  - Mild
  - Severe

# Mild hypoglycaemia

This is the most common type of 'hypo'.

## What are the symptoms?

Sometimes there may be no symptoms at all but some of the common symptoms are listed on page 4. Additional symptoms include:

- Trembling
- Tingling hands, feet, lips or tongue
- Blurred vision
- Difficulty in concentrating
- Palpitations
- Headache

If you have any symptoms you should do a blood glucose test to check your exact level.

If your level is less than 4.0 mmol/L you are having a 'hypo'.

If your level is not below 4.0 mmol/L then you are unlikely to be having a 'hypo'.

If in doubt, treat your 'hypo' as instructed.

**You should always follow the specific advice given by your diabetes team.**

## What is the treatment?



Treating a mild 'hypo' is simple.

- Take 15g of fast acting carbohydrate, e.g.:
  - ✓ 5 glucose (Dextro-Energy\*, Lucozade\*) tablets **or**
  - ✓ 100 ml Lucozade\* original (note other versions contain varying amounts of glucose) **or**
    - ✓ 150 ml fruit juice **or**
  - ✓ 150 ml sugary drink (e.g. Coke\*, 7UP\* - not the diet version)

- Check your blood glucose level after 10-15 minutes
- If you still don't feel well and your blood glucose level remains less than 4.0 mmol/L, repeat the above
- Eat your next meal if due
- If your next meal is not due within an hour, have a small snack e.g. bread, fruit
- If you are due to take your insulin and / or diabetes medication do so as normal.

**Remember – always carry glucose tablets or some form of sugar with you**

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# Severe hypoglycaemia

Sometimes if the hypoglycaemic episode progresses very quickly or if early warning signs are ignored you may not be able to administer your own treatment. In this case you will require the assistance of a third party e.g. family or friends.

**When you require the assistance of a third party to treat your 'hypo', this is referred to as a severe 'hypo' and should ALWAYS be reported to your nurse or doctor.**

Severe 'hypos' occur when there is insufficient glucose circulating in your bloodstream to facilitate the normal functioning of your brain.

**Severe 'hypos' can fall into two categories:**

- When you **are conscious but too confused** to administer treatment for the 'hypo' yourself
- **When you are unconscious.**



SUE HEYWOOD  
UK  
Sue has type 2 diabetes

## What are the signs and symptoms of a severe 'hypo'?

Symptoms can include:

- Poor concentration
- Slurred speech
- Glazed eyes
- Poor co-ordination
- You may appear to be drunk when you are not
- Altered or inappropriate behaviour
- Confusion
- Drowsiness
- Seizures
- Loss of consciousness

You may sometimes recognise a severe 'hypo' and be able to ask for assistance. Sometimes however, you will not be able to recognise the 'hypo' as a result of associated confusion.

Let your friends and family read this booklet so they will recognise this unusual behaviour and be able to help you.

**People should not take any notice if you try to refuse their help – you may not recognise your symptoms and be reluctant to take the treatment they offer.**

## What is the treatment?

Immediate action should be taken. Ask for assistance, if able, as soon as possible.

If you are conscious and it is safe to swallow, have some sugar (liquid form is the easiest) as quickly as possible, e.g.:



- Take 15g of fast acting carbohydrate, e.g.:
  - ✓ 5 glucose (Dextro-Energy\*, Lucozade\*) tablets **or**
  - ✓ 100 ml Lucozade\* original (note other versions contain varying amounts of glucose) **or**
    - ✓ 150 ml fruit juice **or**
  - ✓ 150 ml sugary drink (e.g. Coke\*, 7UP\* - not the diet version)

Explain to your friends and family that they may have to encourage you to drink it.

## When you start feeling better:

- Check your blood glucose level
- Eat your meal if due or have a snack e.g. bread, fruit

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**If you pass out or become unconscious, your family will need to follow the treatment guidelines below.**

### What is the treatment?

Explain to your friends and family that if they find you unconscious they need to follow the below guidance:

- **Do not** give you anything by mouth (as you may choke)
- **Place you in the recovery position**
- Inject you with glucagon
- If glucagon is not available call 999 / 112 immediately for medical help
- Insulin should never be given to an unconscious patient.



### What is glucagon?

- Glucagon has the opposite effect to insulin. It works by raising blood glucose levels temporarily
- The effect of glucagon only lasts for a short time
- When you are conscious again, you must have a drink containing sugar to stop the 'hypo' returning.

**If you have frequent episodes of mild hypoglycaemia or one episode of severe hypoglycaemia, your diabetes treatment may need to be changed. You should record each episode and inform your doctor or nurse.**

# Using glucagon

## How do you use glucagon for treating hypoglycaemia?

You should ensure that you have access to glucagon at home, in work/school etc.

When unopened, glucagon should be stored in the refrigerator.

You should check regularly that it is in date.

Friends and family may be nervous about giving you an injection. Let them give you your insulin occasionally, to help them overcome their worries and ask your nurse to provide an injection demonstration to your family.

Instructions on how to use a glucagon kit are shown in the patient leaflet that accompanies the kit. Let your friends and family read it so that they are familiar with it.



**Regularly check your supply of glucagon to ensure it is in date.**



### When you start feeling better:

- When you are conscious, have a drink containing sugar to prevent a further 'hypo'
- Continue to have small amounts of sugary drinks until you feel well enough to eat
- When you feel well enough to eat, have some slow acting carbohydrate e.g. 2-3 slices of brown bread
- Check your blood glucose level has returned to normal  
— speak to your doctor or nurse about adjusting insulin doses.

**If you have a single episode of severe hypoglycaemia or recurrent episodes of mild hypoglycaemia – contact your doctor or nurse.**

# 'Hypo' unaware

The warning symptoms and signs which you associate with the onset of a 'hypo' is your body's defence mechanism to counteract the 'hypo' and protect you from its consequences.

The body's response to hypoglycaemia serves three functions:

1. Warns you that your blood glucose level is falling
2. Helps raise your blood glucose level into a safe range
3. Awakens you from your sleep if you become hypoglycaemic overnight.

The warning signs, while unpleasant, are particularly important, as they allow you to take action before your blood glucose level falls too low. This natural process helps avoid severe hypoglycaemia or unconsciousness / coma.

With prolonged, recurrent 'hypos' these warning signs can become impaired and a 'hypo' can go unnoticed.



THOMAS MCKEON  
Ireland  
Thomas has type 2 diabetes

## How do you know if you are 'hypo' unaware?

If you experience:

- Recurrent blood glucose levels below 3.5 mmol/L without any symptoms
- That your usual unpleasant feelings associated with 'hypos' do not occur anymore, in spite of your blood glucose level falling very low
- Recurrent severe hypoglycaemic episodes.

Should you become 'hypo' unaware, this can pose serious problems, impacting on your safety and your quality of life.

**You should always discuss your hypoglycaemic episodes and how they feel with your doctor or nurse at every visit.**

# Checklist



## A few useful tips to help with 'hypos'.

- ✓ Test your blood glucose levels regularly
- ✓ Treat 'hypos' promptly
- ✓ Always carry food or drink containing sugar e.g. glucose tablets
- ✓ Wear a diabetes identification bracelet/necklace or carry a diabetes emergency card
- ✓ Tell friends, relatives and people at work about 'hypos' and how they can help
- ✓ Don't walk or swim long distances alone
- ✓ Avoid excessive alcohol consumption
- ✓ Never drink alcohol on an empty stomach
- ✓ Always check your blood glucose level before driving - do not drive without eating if your blood glucose level is below 5.0 mmol/L
- ✓ Try not to miss meals
- ✓ Always take your medication
- ✓ Identify what caused your 'hypo' so you can avoid the same thing happening again
- ✓ Visit your doctor regularly to check your diabetes and general health.



MORGANNE SHONE  
UK  
Morganne has type 1 diabetes

# Notes

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# changing diabetes®

Living with diabetes isn't easy. It takes discipline, control and support from the people around you. At Novo Nordisk, we want to be your partner in living well with diabetes. We understand that diabetes is just part of who you are, not what defines you. And that you need to be able to count on the company that supplies your medicine.

So what can you expect from us? Besides the medication you need to stay healthy and in control of your life and our leadership in the search for a cure, you can expect us to continue taking real steps in making sure everyone with diabetes, no matter where they are, has access to the care they need. To be ethical and responsible in the way we do business. And just as importantly, you can count on us to help change the way the world sees your diabetes - so that it just sees you.

Further information is available from:  
Diabetes Ireland  
Lo Call: 1850 909 909  
[www.diabetes.ie](http://www.diabetes.ie)  
[info@diabetes.ie](mailto:info@diabetes.ie)

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