Who is the leaflet for? What is its aim?
This leaflet is for young people with Type 1 diabetes.
The aim of the leaflet is to help you understand and manage hypoglycaemia (hypo’s) safely and effectively.
The leaflet will cover:
• What is hypoglycaemia (Hypo)?
• What causes hypoglycaemia?
• Signs and symptoms of hypoglycaemia
• How to treat hypoglycaemia?
• Night time hypoglycaemia?

What is hypoglycaemia?
Hypoglycaemia, also very commonly known as a hypo, is a blood glucose level that has dropped too low. In most cases this level will be below 4.0mmol/l. In some cases however, it is possible to feel hypo at a higher level. This tends to happen if your blood glucose levels are running generally higher. Your body starts to get used to the higher blood glucose level. So when you are bringing your levels down into target range, your body is not used to your levels being so low and then you start to get symptoms of a low blood glucose level when you may not be.

What causes hypoglycaemia?
• If you have too much insulin, this moves too much glucose out of your blood making your blood glucose levels drop low.
• Not eating enough food for the insulin you have had
• A snack/meal has not been completed and insulin has been given
• A missed snack/meal
• Exercise: during exercise your body requires extra glucose. If this is not replaced, your blood glucose levels can drop. Remember! This can happen hours after the physical activity (For more information please speak to the diabetes team)
• Alcohol: can make blood glucose levels drop many hours after even a small drink (For more information please see the Alcohol information leaflet)
Signs and symptoms of hypoglycaemia

There are many signs and symptoms. Not everyone will experience the same signs. It is extremely important to check your blood glucose levels whenever symptoms are experienced or if you feel different/strange. This is particularly important immediately after diagnosis when you are learning your own personal hypo signs.

Symptoms of hypoglycaemia can be divided into two categories:

<table>
<thead>
<tr>
<th>BODY (Earlier signs)</th>
<th>BRAIN (Later signs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms caused by the body trying to raise blood glucose levels by releasing adrenaline</td>
<td>Symptoms caused by the lack of glucose in the brain</td>
</tr>
<tr>
<td>• Irritability</td>
<td>• Weakness/dizziness</td>
</tr>
<tr>
<td>• Hunger</td>
<td>• Difficulty concentrating</td>
</tr>
<tr>
<td>• Feeling sick</td>
<td>• Double/blurred vision</td>
</tr>
<tr>
<td>• Shaky</td>
<td>• Feeling warm/hot</td>
</tr>
<tr>
<td>• Anxiety</td>
<td>• Headache</td>
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<tr>
<td>• Heart palpitations</td>
<td>• Drowsiness</td>
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<tr>
<td>• Numbness in the lips, tongue, fingers</td>
<td>• Odd behaviour/poor judgement</td>
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<tr>
<td>• Look pale</td>
<td>• Confusion</td>
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<tr>
<td>• Cold sweats</td>
<td>• Problem with short term memory</td>
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<tr>
<td>• Clammy</td>
<td>• Slurred speech</td>
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<tr>
<td></td>
<td>• Unsteady walking/lack of co-ordination</td>
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<tr>
<td></td>
<td>• Loss of consciousness and Seizures – both are rare</td>
</tr>
</tbody>
</table>

How to treat hypoglycaemia

• Always do a blood glucose test to confirm a hypo. If a hypo is suspected and you do not have a testing kit to hand, always treat as a hypo just in case and test as soon as you can. This will outweigh the risk of having a more severe hypo if you ignore symptoms and do not treat appropriately.

• If your blood glucose levels is less than 4.0mmol/l always give a quick acting glucose. Glucose will give a quick rise in blood glucose levels.

• Avoid food and drink containing fat eg chocolate, biscuits, milk etc

Remember! Fat causes the stomach to empty more slowly meaning the glucose reaches the blood stream much later prolonging your hypo and may cause further hypo’s later on.
Hypoglycaemia

Hypo treatment
Blood glucose level below 4.0 mmol

IMMEDIATELY have rapid acting carbohydrate
(amount according to age)

AFTER 15 MINUTES
Re-test your blood glucose levels.
Are they above 5 mmol/L?

NO 😞
(Or you still feel hypo)
Repeat treatment

YES ☺
(And you feel better)
You may need a small snack

Severe Hypo Treatment
If child unable to swallow, or unconscious:
Give glucagen injection (orange box)

follow up snacks when active
• 1 digestive biscuit
• 2 jaffa cakes
• 2 rich tea biscuits

Please note that it is essential to always carry hypo treatment with you

Please note that it is essential to always carry a hypo treatment with you
Remember! Once you have treated a hypo:

- Ensure that you **do not** participate or continue with any physical activity until all hypo signs have gone and your levels have returned to normal.
- Wait at least 15 minutes before continuing with anything requiring full concentration. Additional time may be required for driving or before taking an exam (can take up to 45 minutes to fully recover from a hypo for the situations above).
- Occasionally there may be additional factors that can increase and prolong hypoglycaemia episodes e.g. Gastroenteritis (For further advice please see the Managing Sick Days information leaflet).

**Night time hypoglycaemia**

The majority of you will wake during the night and treat the hypo as normal. Some parents/friends might be woken by unusual noises if you are particularly restless.

Some young people, however have hypo’s overnight but do not necessarily wake up from their hypo symptoms in the night. The body’s early response to raising blood glucose levels is by releasing adrenaline, but this is reduced during deep sleep!

If your blood glucose levels do drop overnight, the body has a way of bringing you out of a hypo by releasing other hormones to raise your blood glucose level. If this happens, you may notice that your blood glucose levels are high when you wake and you may feel tired or have a headache or feel like you have had a hypo. If you think that you may be having hypo’s overnight, it is a good idea to do some blood glucose tests around 3am to see what your blood glucose levels are.

**Remember! Never increase the bedtime insulin if there is any suspicion that you are having night time hypo’s. Always check your levels overnight first and discuss with the diabetes team for further advice.**

**Causes of night time hypoglycaemia**

- The bedtime or basal insulin dose is too high.
- Rapid acting insulin at dinner/teatime given in the thigh; a delayed hypo due to the slower absorption rate from the thigh.
- Over correcting a high blood glucose level after exercise.
Hypoglycaemia

- Exercise during the afternoon/evening which was not covered by additional carbohydrates or a reduction in insulin dose
- Alcohol consumption in the evening

**Symptoms indicating night time hypoglycaemia**

- Nightmares
- Sweating/damp sheets
- Headache in the morning
- Tiredness on waking

Your diabetes team are always there to help if you require reassurance or guidance managing hypoglycaemia.

**If you are getting more than 3 hypos per week, please contact the diabetes team for further advice, your insulin doses may need adjusting.**

**Handy hypo hints**

- Have your testing kit with you at all times
- Always have plenty of hypo treatments with you at all times
- If you are worried about the hypos you are experiencing, please talk to the diabetes team. We are here to help you. We can help you find out why you are going low and stop them from happening
- The best way to treat a hypo is to prevent them from happening in the first place!
- It is very important that your friends need understand what hypoglycaemia is and how it is managed. When you are having a hypo, you might not know what you are doing, particularly if you have been drinking alcohol. So if your friends are there to help you, this can be extremely important to keep you safe and get the help you need.
- Wear a form of identification stating that you are an insulin dependent diabetic
- Enter In Case of an Emergency (I.C.E) details on your mobile phone
Hypoglycaemia

Further information leaflets:
Hypos and:
- Driving
- Alcohol
- Sick days
- Medibands

Contacts/Further information
E-mail: Kidz.diabetes@addenbrookes.nhs.uk
Telephone: Monday to Friday 09:00 to 17:00  01223 274638
Out of hours: 01223 245151, ask for ‘child diabetes on rotawatch’.

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Other formats:
If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.
Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

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