

## Children with diabetes at school

*What all staff need to know*



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At least 20,000 children of school age in the UK have diabetes. It is therefore likely that you will teach or supervise a child with the condition at some time.

# Introduction

This leaflet provides schools with the information needed to give support to a child with diabetes. However, it can only give general information.

For advice and information about individual children, schools should always involve the parents/carers of the child with diabetes and their diabetes care team. The paediatric diabetes specialist nurse (PDSN), who will be a member of the diabetes care team, will be a central point of contact and should be able to advise the school.

## The Disability Discrimination Act

All children with diabetes are covered by the Disability Discrimination Act. For more information contact the Disability Rights Commission helpline 0845 7622 633 or email [enquiry@drc-gb.org.uk](mailto:enquiry@drc-gb.org.uk)

## Symptoms of diabetes

Schools can be in a position to notice the signs that a child may have diabetes. The main symptoms are:

- increased thirst
- going to the loo all the time
- extreme tiredness
- weight loss
- genital itching or regular periods of thrush
- blurred vision.

At the back of the leaflet are record cards where personal details of the child can be entered. These can be photocopied and circulated to relevant staff.

## What is diabetes?

Diabetes mellitus is a condition in which the amount of glucose (sugar) in the blood is too high because the body cannot use it properly. Glucose comes from the digestion of starchy foods such as bread, rice, potatoes, chapatis, yams and plantain, from sugar and other sweet foods, and from the liver which makes glucose.

Insulin is vital for life. It is a hormone produced by the pancreas, which helps the glucose to enter the cells where it is used as fuel by the body. The main symptoms of untreated diabetes are increased thirst, going to the loo all the time – especially at night, extreme tiredness, weight loss, genital itching or regular episodes of thrush, and blurred vision.

Type 1 diabetes develops if the body is unable to produce any insulin. This type of diabetes usually appears before the age of 40. It is treated by insulin injections, diet and regular physical activity.

Type 2 diabetes develops when the body can still make some insulin, but not enough, or when the insulin that is produced does not work properly (known as insulin resistance). In most cases this is linked with being overweight. This type of diabetes usually appears in people over the age of 40, though in South Asian and African-Caribbean people often appears after the age of 25. However, recently, more children are being diagnosed with the condition, some as young as seven. Type 2 diabetes is treated with lifestyle changes such as a healthier diet, weight loss and increased physical activity. Tablets and/or insulin may also be required to achieve normal blood glucose levels.

The main aim of treatment of both types of diabetes is to achieve blood glucose, blood pressure and cholesterol levels as near to normal as possible. This, together with a healthy lifestyle, will help to improve well-being and protect against long-term damage to the eyes, kidneys, nerves, heart and major arteries.

## Treating diabetes

**Most children with diabetes will be treated by a combination of insulin and a balanced diet, although some (with Type 2 diabetes) may be taking tablets with the recommendation of regular physical activity.**

### Insulin

Insulin has to be injected – it is a protein that would be broken down in the stomach if it was swallowed like a medicine.

Children generally take between two and four injections per day. Those who take two injections usually take them at breakfast and at dinner time.

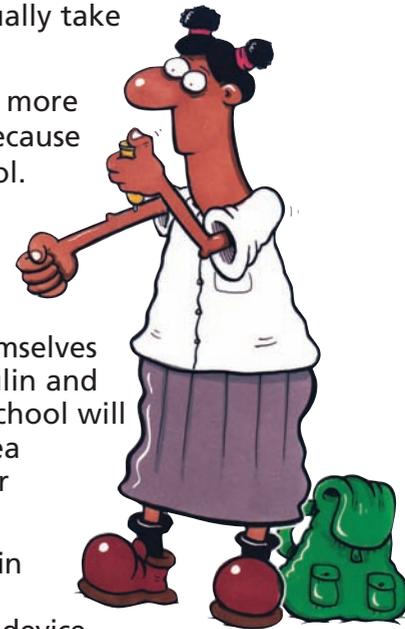
An increasing number of children will take more than two injections a day, but this is not because their diabetes is 'worse' or harder to control. Taking more injections can give greater flexibility and older children, especially, may choose to take three or four injections a day.

This will mean that they have to inject themselves at lunchtime and so will need to bring insulin and their injecting equipment to school – the school will need to identify an appropriate private area where the injections can be taken. Younger children may need help with injecting.

In most cases the equipment will be an insulin 'pen' rather than a syringe. The child's parents/carers or PDSN can demonstrate the device used and discuss where the pen and insulin should be kept. Some children have their insulin by pump. This will need further explanation from a parent or PDSN.

### Food

The child and family should have been seen by a dietitian at the hospital, who will have advised them about suitable food choices on which daily meals and snacks can be based. The child's parents/carers will be able to explain any particular needs to staff.



The diet for children with diabetes is based on the balanced, varied diet recommended for every child – it is normal healthy food which is low in fat, salt and sugar including plenty of fruit and vegetables. A regular intake of starchy carbohydrate foods (see page 7) is important to keep the child's blood glucose level close to the normal range (4-8mmol/l rising to no higher than 10mmol/l two hours after a meal).

There is no special diabetic diet and diabetic foods are not recommended by Diabetes UK as they offer no benefit over ordinary foods and can be expensive.

### Eating times

Meals and snacks should be eaten at regular intervals, following a plan agreed with the family and their dietitian. The child needs to eat at regular times in order to maintain stable blood glucose levels. A missed or delayed meal or snack could lead to hypoglycaemia (see pages 8–9).

Snacks may need to be eaten during class time but, if the times can coincide, they are best eaten at break to avoid any fuss. If you feel the class should understand why the child is having a snack, first ask the child how they feel about having their diabetes explained to the class.



It is important to know the times when the child needs to eat and make sure that they keep to these times. This may involve ensuring they are near the front of the queue (and at the same sitting each day) for the midday meal.

## Ideal meals

### Healthy balance

Foods can be divided into five main groups. To eat a balanced diet, the child should be aiming to eat foods from all these groups in the right proportions, as shown in the chart, with all main meals being based around starchy foods such as bread, potatoes and pasta.



The child should eat all of their lunch to help prevent a hypo occurring (see pages 8–9).

### Snacks

The choice of food will depend on the individual child but could include:

- roll/sandwich
- cereal bar
- one individual mini pack of dried fruit
- muffin
- a portion of fruit
- two biscuits, eg garibaldi, ginger biscuits.

### Sugary foods

Children can include moderate amounts of high fat, high sugar foods such as cakes and biscuits as part of a healthy diet without harming blood glucose control in the long term, but eating too much will upset the overall balance of the diet.

Soft drinks should be sugar-free or no added sugar drinks as sugar in liquid form is rapidly absorbed and raises blood glucose levels quickly (that's why sugary drinks are a good treatment for hypos).

All children eat sugary foods occasionally and children with diabetes shouldn't feel it is forbidden for them to do the same.

# Hypoglycaemia (Hypo)

**Hypoglycaemia is the most common short-term complication of diabetes and occurs when blood glucose levels fall below 4mmol/l.**

Hypos are more likely to happen towards mealtimes, during or after sessions of increased activity or if a meal or snack has been missed. Blood glucose levels fall because

- too much insulin has been given
- not enough food, especially carbohydrate, has been eaten
- the child has been more active than usual.

## How to recognise a hypo

Hypos happen quickly, but most children will have warning signs that will alert them, or people around them, to a hypo. These warning signs can include:

- hunger
- trembling or shakiness
- sweating
- anxiety or irritability
- fast pulse or palpitations
- tingling of the lips
- glazed eyes
- pallor
- mood changes, especially angry or aggressive behaviour
- lack of concentration
- vagueness
- drowsiness

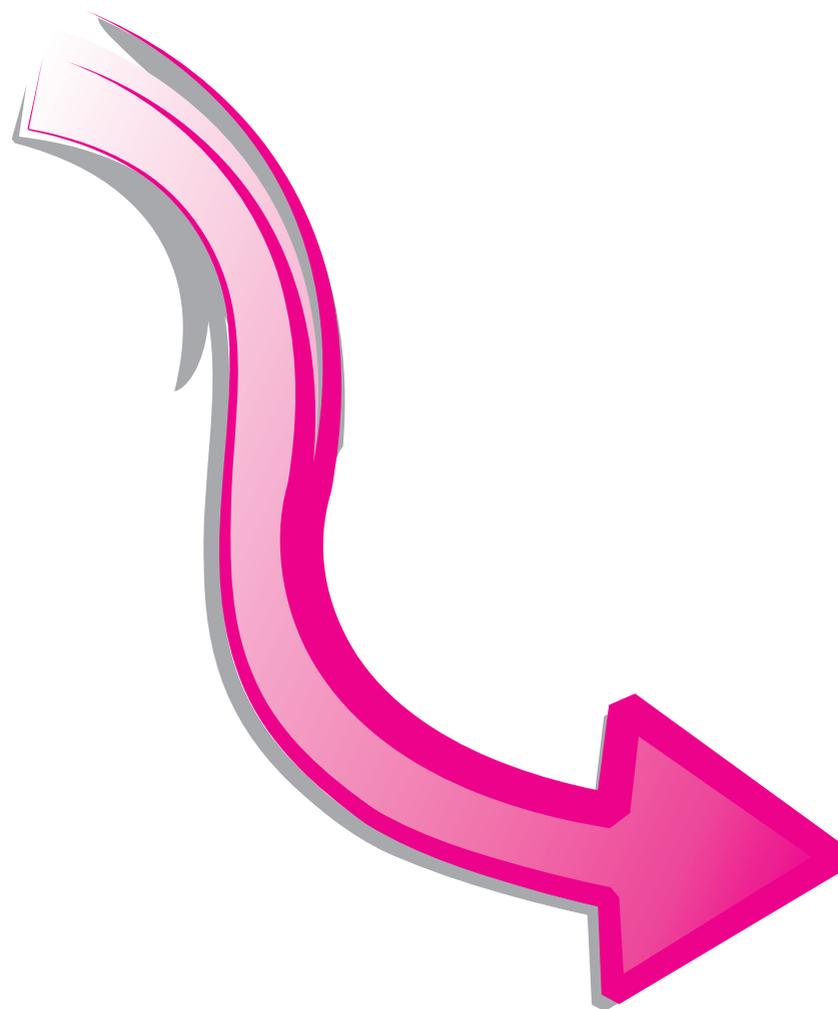
The symptoms can be different for each child and the child's parents/carers can tell you what their child's warning signs are. These should be noted in the diabetes record card at the back of this leaflet.

## Treating a hypo

It is very important that a hypo is treated quickly. If it is left untreated, the blood glucose level will continue to fall and the child could become unconscious. They should not be left alone during a hypo – nor be sent off to get food to treat it. **Recovery treatment must be brought to the child.** If a hypo occurs during activity, there is no reason why the child should not continue with the activity once they have recovered.

**Pull out poster:**

Please pull out and put up in the staff room.



# Hypo – a quick guide

## What causes a hypo?

- too much insulin
- a delayed or missed meal or snack
- not enough food, especially carbohydrate
- unplanned or strenuous exercise
- drinking large quantities of alcohol or alcohol without food
- sometimes no obvious cause

## Watch out for:

- hunger
- trembling or shakiness
- sweating
- anxiety or irritability
- fast pulse or palpitations
- tingling of lips
- glazed eyes
- pallor
- mood change, especially angry or aggressive behaviour
- lack of concentration
- vagueness
- drowsiness.

## What to do

**Immediately** give something **sugary**, a quick-acting carbohydrate such as one of the following:

- a glass of lucozade, coke or other non-diet drink
- three or more glucose tablets
- a glass of fruit juice
- five sweets, eg jelly babies
- Glucogel.

The exact amounts needed will vary, depending on the age of the child. Their diabetes team can advise you.

To prevent the blood glucose from dropping again **follow** this with a longer-acting carbohydrate such as one of the following:

- roll/sandwich
- portion of fruit
- one individual mini pack of dried fruit
- cereal bar
- two biscuits, eg garibaldi, ginger nuts
- or a meal if is due.

If the child still feels hypo after 15 minutes, something sugary should again be given. When the child has recovered, give them some starchy food, as above.

If the child is **unconscious do not give them anything to eat or drink and call for an ambulance.**



Some children will know when they are going hypo and can take appropriate action themselves but if the child needs help and, providing they are still able to swallow, you can offer a sugary drink (non-diet). If they are reluctant to drink, encourage them to take GlucoGel (a glucose gel) into the inside of their cheek and then massage it gently from the outside. Glucose will be absorbed through the lining of the mouth and it will help recovery.

Immediate action	Follow-up action
<p>Give the child something <b>sugary</b>, to raise the blood glucose level quickly. The following are good examples*:</p> <ul style="list-style-type: none"> <li>● Lucozade, cola or another (non-diet) drink</li> <li>● glucose tablets. 3 or more</li> <li>● fresh fruit juice.</li> </ul> <p>* amounts may vary depending on the child's age</p>	<p>Having some <b>starchy</b> food on recovery is important to prevent blood glucose levels falling again, for example:</p> <ul style="list-style-type: none"> <li>● roll/sandwich</li> <li>● fruit</li> <li>● cereal bar</li> <li>● two biscuits, eg garibaldi, ginger biscuits</li> <li>● a meal, if it is due.</li> </ul>

If the child still feels hypo after 15 minutes, check their glucose level and some more sugary food should be given (see above and page 7).

### Unconsciousness

In the unlikely event of a child losing consciousness, do not give **anything** by mouth. Place them in the recovery position (lying on their side with the head tilted back). Call an ambulance, informing them the child has diabetes. The child will come around eventually and should not come to any immediate harm, if they are kept in the recovery position.

**Note:** The child may have a seizure, during a severe hypo, with jerking of one or more limbs. Although this may resemble an epileptic fit, it does **not** mean the child has developed epilepsy.

## Physical activity

Diabetes shouldn't stop children with the condition from enjoying any kind of physical activity, or being selected to represent school and other teams, providing they have made some simple preparations – look at five times Olympic gold medallist, Steve Redgrave.

Preparations are needed because all forms of physical activity, such as swimming, football, gymnastics and walking, use up glucose. If the child does not eat enough before starting an activity, their blood glucose level will fall too low and they will experience a hypo (see pages 8–9).

The more strenuous and prolonged the activity, the more food will be needed beforehand, and possibly during and afterwards.

**Before an activity**, it is important for the child to have a non-diet/isotonic drink or an extra snack (see page 7). If the activity is after lunch, it may be easier for the child to have a slightly larger lunch.

**During an activity**, there should be glucose tablets or a sugary drink nearby (eg on the side of the pool or at the side of the pitch) in case the child's blood glucose level drops too low, which could lead to a hypo (see pages 8–9).

**After an activity** the child may need to eat some *starchy* food, such as a sandwich or a roll, but this will depend on the timing of the activity (for example, it may be followed by lunch) and the level of exercise taken.



NB. Pupils with Type 2 diabetes and treated with Metformin are unlikely to have a hypo so do not need the aforementioned treatment.

While it is important that teachers keep watch over all the children, the child with diabetes need not be singled out for special attention. This could make them feel different and may lead to embarrassment.

The recommended level of physical activity is at least 60 minutes a day. Children with diabetes should not use their condition as an excuse for not participating in any physical activity. If this does happen regularly, speak to their parents/carers to find out more about the individual situation. Diabetes should not be an excuse for opting out of school activities.

## Other considerations

### Sickness

If the child is unwell, their blood glucose levels may rise. This can happen even if the child just has a cold. High blood glucose levels may cause them to be thirsty, with the need to go to the loo more frequently. If teaching staff notice this during the day, they should report it to the child's parents/carers so the necessary adjustments can be made to the insulin dose.

If the child vomits at school, call their parents/carers. Should the child continue to vomit, take them to the nearest Accident and Emergency department.



## Blood glucose testing

Most children with diabetes will need to test their blood glucose levels on a regular basis. They may need to do this at school, especially before or after physical activity, or if they feel that their blood glucose level is falling too low or climbing too high.

Blood glucose testing involves pricking the finger, using a special finger-pricking device, to obtain a small drop of blood. This is then placed on a reagent strip, which is read by a small, electronic blood glucose meter. A test takes about a minute in total.

If these tests are needed in school, the child's parents/carers can advise on how often and where they should be done. Some children may need help with blood glucose testing.

## School trips

### Day trips

Going on a day trip should not cause any real problems, as the routine will be much like that at school.

The child with diabetes should take their insulin and injection kit, in case of any delays over their usual injection time. They will have to eat some starchy food following the injection, so should also have some extra starchy food with them. They should also take with them their usual hypo treatment.

### Overnight stays

With overnight stays, the child's routine will include insulin injections and blood glucose monitoring. You will need to be confident that the child is able to do their own injections or that there is a member of staff to take responsibility for helping with injections and blood glucose testing.

If any medical equipment has been lost or forgotten, contact the paediatric department or Accident and Emergency department at the nearest hospital, who will be able to help.

## Going abroad

If you are travelling outside the UK, you will find the following Diabetes UK publications useful: *Travel and diabetes*, which gives advice on managing diabetes confidently away from home.

For a *Country guide*, which contains information about local foods and diabetes care, and translations of useful phrases, first contact Diabetes UK Distribution to see that a guide is available for the country you are visiting.

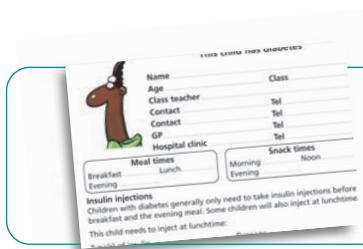
It is important to check that travel insurance taken will cover pre-existing conditions, such as diabetes, in case of a medical emergency. Diabetes UK produces an information sheet *Insurance and diabetes*, which can be downloaded from our website: [www.diabetes.org.uk](http://www.diabetes.org.uk) or ordered from our distribution department.

An emergency identity card may be a useful item to carry.

## Further information

A policy guidance pack - *Medical Conditions at School* has been developed by Diabetes UK in collaboration with Asthma UK, Anaphylaxis Corporation, Epilepsy and Action & LMCA. It can be downloaded from [www.medicalconditionsatschool.org.uk](http://www.medicalconditionsatschool.org.uk) and contains forms and further advice.

See the back page for further details on how to order any of the above products.



When going on any kind of trip remember to take a copy of the diabetes record card.

# About Diabetes UK

Diabetes UK is the charity for people with diabetes, their family, friends and carers. Our mission is to improve the lives of people with the condition and work towards a future without diabetes.

Diabetes UK is one of the largest patient organisations in Europe. We stand up for the interests of people with diabetes by campaigning for better standards of care. We are the largest funder in the UK of research into better treatments for diabetes and the search for a cure. We provide practical support and information and safety-net services to help people manage their diabetes.

## Did you know?

There are over two million people in the UK diagnosed with diabetes and an estimated 750,000 have the condition but don't know it.

- Our website [www.diabetes.org.uk](http://www.diabetes.org.uk) has over 4,000 visitors a day.
- We have a **network of offices throughout the UK** – see page 16.
- We have **over 170,000 members**.
- Diabetes UK Careline staff **answer over 200 enquiries a day**.
- We spend **£5 million a year on diabetes research**.
- We produce a wide range of **magazines, books and leaflets** covering all aspects of diabetes.

All of this and more is made possible through donations and by people being members of Diabetes UK.

## How can you help?

You can be actively involved in the work Diabetes UK does.

**Become a member** – call free on 0800 138 5605

**Diabetes Campaigners Network** – for details call 020 7424 1000  
Email [dcn@diabetes.org.uk](mailto:dcn@diabetes.org.uk) [www.diabetes.org.uk/campaigns/](http://www.diabetes.org.uk/campaigns/)

**Fundraising ideas and events** – call 020 7424 1000  
Email [community@diabetes.org.uk](mailto:community@diabetes.org.uk) [www.diabetes.org.uk/fundraise/](http://www.diabetes.org.uk/fundraise/)

**Make a donation** – call 020 7424 1010 [www.diabetes.org.uk/donate/](http://www.diabetes.org.uk/donate/)

# Become a member of Diabetes UK

Diabetes UK offers a membership scheme to help people attain good management of their diabetes.

Membership of Diabetes UK keeps you up to date with diabetes developments and connects you with a network of people who understand the condition.

## As a member of Diabetes UK you benefit from:

- Our bi-monthly members' magazine, **Balance**. Packed with the latest information about diabetes research, care and treatment.
- One-to-one confidential **support and information** from trained counsellors on Diabetes UK Careline, open during office hours.
- A wide range of **publications**. Some available on tape and in the main Asian languages and Welsh.
- Diabetes UK's website [www.diabetes.org.uk](http://www.diabetes.org.uk).
- Details of **voluntary groups** near you for the chance to meet people with diabetes and share ideas and information.
- Educational and support **events** designed to meet the needs of people with diabetes.
- The opportunity to **add your voice to that of Diabetes UK** to campaign for better diabetes care across the UK.



## To become a member of Diabetes UK

call free on 0800 138 5605  
or visit [www.diabetes.org.uk/join](http://www.diabetes.org.uk/join)

For further information please call our Customer Services team on 0845 123 2399, during office hours.

## Diabetes UK

### National and regional offices

Central Office	Telephone <b>020 7424 1000</b>
Diabetes UK Cymru	Telephone <b>029 2066 8276</b>
Diabetes UK Northern Ireland	Telephone <b>028 9066 6646</b>
Diabetes UK Scotland	Telephone <b>0141 332 2700</b>
Diabetes UK Eastern	Telephone <b>01376 501390</b>
Diabetes UK East Midlands	Telephone <b>0115 950 7147</b>
Diabetes UK London	Telephone <b>020 7424 1116</b>
Diabetes UK Northern & Yorkshire	Telephone <b>01325 488606</b>
Diabetes UK North West	Telephone <b>01925 653281</b>
Diabetes UK South East	Telephone <b>01372 720148</b>
Diabetes UK South West	Telephone <b>01823 324007</b>
Diabetes UK West Midlands	Telephone <b>01922 614500</b>

Visit [www.diabetes.org.uk/in\\_your\\_area/](http://www.diabetes.org.uk/in_your_area/) for email addresses

### Useful contacts

Become a member	Telephone <b>0800 138 5605</b>
Supporter Services	Telephone <b>0845 123 2399</b>
Diabetes UK Careline (or if hearing impaired)	Telephone <b>0845 120 2960*</b> Textphone <b>020 7424 1031</b>
Publications orderline	Telephone <b>0800 585 088</b>

Visit [www.diabetes.org.uk](http://www.diabetes.org.uk) for further information

**\*Diabetes UK Careline** is here to help. Call **0845 120 2960** for support and information (although unable to provide individual medical advice). Diabetes UK Careline is open Monday to Friday 9am to 5pm. Calls cost no more than 4p per minute. Calls from mobiles usually cost more.



**The charity for people with diabetes**

10 Parkway, London NW1 7AA

**Telephone** 020 7424 1000 **Fax** 020 7424 1001

**Email** [info@diabetes.org.uk](mailto:info@diabetes.org.uk)

**Website** [www.diabetes.org.uk](http://www.diabetes.org.uk)

Registered charity no. 215199 © Diabetes UK 2006

## This child has diabetes

Name .....

Age ..... Class .....

Class teacher .....

Contact 1 ..... Tel .....

Contact 2 ..... Tel .....

GP ..... Tel .....

Hospital clinic ..... Tel .....

### Meal times

Breakfast ..... Lunch .....

Evening .....

### Snack times

Morning ..... Afternoon .....

Evening .....

### Insulin injections

Children with diabetes generally only need to take insulin injections before breakfast and the evening meal. But some children will also inject at lunchtime.

This child needs to inject at lunchtime:

Type(s) of insulin \_\_\_\_\_ Dosage \_\_\_\_\_

## Hypoglycaemia symptoms and treatment for this child:

Symptoms .....

Treatment .....

**Do not** leave the child alone or move them until the hypo is over.

**Remember** to always follow the sugary immediate action (eg Lucozade) with some starchy food (eg a sandwich or cereal bar).

**Unconsciousness:** in the unlikely event of the child losing consciousness, do not give them anything to swallow. Place them in the recovery position (on their side with the head tilted back) and phone for an ambulance.

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Age ..... Class .....

Class teacher .....

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