

diabetes information for schools

DUTY OF CARE

Schools have a legal responsibility to provide:

- a safe environment
- adequate supervision

In schools with students who have diabetes, additional care must be taken. Staff (including relief staff) must have sufficient knowledge about diabetes to ensure the safety of those students (especially in regard to hypoglycaemia and safety in sport).

WHAT IS DIABETES?

Diabetes exists when blood glucose builds up to high levels. It is not contagious. There are two main types of diabetes:

- Type 1 diabetes usually occurs in childhood or early adulthood however it can occur at any age. It is due to a severe deficiency of insulin and is fatal without lifelong insulin injections. Insulin allows a return to good health.
- Type 2 diabetes occurs in adults (usually over 40 years) however it is now being seen in adolescents. It may be accelerated by lifestyle factors (obesity, lack of regular exercise, overeating) and is treated by diet, exercise, tablets and occasionally insulin injections.

DIABETES AND SCHOOLING

Diabetes is rarely the cause of significant absenteeism. Students with diabetes can do everything their peers do but may need:

- Special consideration
- Extra supervision
- Extra toilet privileges
- To eat at additional times, especially before or during sport
- Extra consideration if unwell
- Special provisions for privacy if testing blood glucose levels and injecting insulin at school.

For children with special requirements, a written individual Management Plan incorporating medical recommendations should be developed with the school in association with the parents/guardians and medical practitioner. This should be attached to the student's records.

TREATMENT

Most children with diabetes are treated each day with:

- 2 to 4 injections of insulin. The dose is adjusted according to blood glucose tests done several times during the day; and
- a regular pattern of snacks and meals.

The timing of injections and food intake is most important. Carbohydrate foods are essential and raise blood glucose levels while insulin and exercise lower them. Maintaining a balance

so the level of glucose is neither too high nor too low is very important however, is sometimes difficult to achieve.

SPECIAL CONSIDERATIONS

1 Low blood glucose levels - hypoglycaemia or 'hypo'

A blood glucose level below 4 mmol/L is regarded as low. Brain function and behaviour deteriorate if the brain is not supplied with enough glucose for its needs. Too much insulin and/or exercise, or not enough carbohydrate foods may cause a low blood glucose level (hypoglycaemia or hypo), depriving the brain of energy.

Hypoglycaemia may be dangerous. Treatment is needed promptly to raise the blood glucose level to prevent a mild hypo from progressing to a severe hypo.

Warning signs of hypoglycaemia

The signs may progress from mild to severe if left untreated.

Features of a mild hypo include:

- Sweating, paleness, trembling, hunger, weakness
- Changes in mood and behaviour (eg crying, argumentative outbursts, aggressiveness)
- Inability to think straight, lack of coordination

In a moderately severe hypo additional signs develop, including:

- Inability to help oneself
- Glazed expression
- Being disoriented, unaware or seemingly intoxicated
- Inability to drink and swallow without encouragement
- Headache, abdominal pains or nausea

In a severe hypo, the signs have progressed to include:

- Dizziness and unsteadiness, inability to stand
- Extreme disorientation, inability to respond to instructions
- Inability to drink and swallow (leading to danger of inhaling food into lungs)
- Unconsciousness or seizures (jerking or twitching of face, body or limbs)

Hypoglycaemia without symptoms

Occasionally a routine blood glucose test will show a result less than 4mmol/L without hypo symptoms being evident. Urgent treatment is still needed to prevent progression to a severe hypo.

What to do for mild or moderately severe hypos

Mild to moderately severe hypos are treated by giving sugar-containing food or drink by mouth.

Remember to:

a) *Act swiftly. Early treatment will prevent a mild hypo progressing to a severe one. If in doubt, TREAT.*

b) *Give rapidly absorbed carbohydrate foods. Any ONE of the following:*

- Fruit juice (1/3 to 1/2 glass or 125-200 ml)
- Sugar-containing soft drink (1/3 to 1/2 can or 125 to 200 ml)
- Glucose tablets equivalent to 10-15 grams (2-3)
- Sugar, honey, sweetened condensed milk or jam (2-3 teaspoons)
- Jelly beans (4 large or 7 small)

Repeat this treatment if there has been no positive response within 10 to 15 minutes.

c) Follow up by giving slowly absorbed carbohydrate food

After approximately 10 to 15 minutes, or once a positive response is evident, give some slowly absorbed starchy carbohydrate food (bread, biscuits, pasta, equivalent to 1 slice of bread).

d) Adult supervision is needed until the student has fully recovered

If symptoms improve sufficiently, the student may return to normal activity in approx 15 minutes. If no improvement is apparent in this time, repeat the treatment. If symptoms remain, notify the parents/guardians or the school doctor or transfer to a hospital by ambulance.

Advise the parents/guardians about the hypo and do not allow the student to travel home unaccompanied.

What to do for severe hypos

Severe hypos, causing unconsciousness, seizures or extreme disorientation, cannot be treated by giving sweet foods or drinks by mouth. They require urgent specialised help using either injections of glucose or a special medication called Glucagon.

In a severe hypo:

- Never put food or drink in the mouth of a person who is unconscious, convulsing or unable to swallow in case it is inhaled.
- Apply first aid principles:
 - Lie the student on one side and protect from injury.
 - Check the airway, breathing and circulation (the "ABC" of first aid). Check the mouth is clear to allow unobstructed breathing.
 - Call an ambulance and inform the operator that there is a *diabetic emergency*.

2 Exercise

Regular exercise is to be encouraged as with other students but requires extra care and planning. As exercising muscles use more glucose for energy, blood glucose levels may fall during, immediately after, or several hours after exercise.

What to do

- Give extra carbohydrate food before sport (a mixture of rapidly and slowly absorbed carbohydrates).
- Give additional food for each half hour of exercise.
- Give extra food after the sport as well if the sport has been particularly vigorous or lengthy.
- More supervision is needed during exercise.
- Food/drinks for the treatment of a hypo need to be available on site.

- Any sport, in which a hypo may cause risk to either the student or someone called upon to help, should be modified or only be considered after careful planning. It should always occur under strict supervision.
- Water sports need very careful planning and supervision as a hypo increases the risk of drowning.

3 Sick Days

Students with diabetes should never be sent to sickbay alone or left unattended when feeling unwell. Vomiting is a danger signal. Students with diabetes who are unwell, and especially when vomiting, need to be seen by a doctor urgently. If parents or guardians are not available, contact the school doctor or transfer to hospital by ambulance.

4 Examinations

Students with diabetes perform at their best when their diabetes is in good control. After a hypo, brain function may not return to normal for several hours and, even then, students may not do as well as expected in an examination.

Students with diabetes may need

- Food during examination in case of hypos.
- Easy access to toilets and additional toilet privileges.
- Special provisions for senior examinations.

5 Camps

Students are able to attend camps when they are reliably independent in the management of their diabetes.

Parents/guardians need to meet with the organisers prior to the camp and provide:

- A written list of special needs.
- Adequate supplies for treatment and testing.
- Details of insulin dosage.
- Emergency contact details.

Emergency phone number 000

**Diabetes Australia Schools Care Line
02 9552 9962**



A joint initiative of the
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