

# diabetes information for schools

## duty of care

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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 will 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 or using an insulin pump.

For children with special requirements, a written individual Management Health Care 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.

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## TREATMENT

Most children with diabetes are treated each day with:

- 2 to 4 injections of insulin or insulin via insulin pump.
- 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, it is sometimes difficult to achieve.

## SPECIAL CONSIDERATIONS

### I. Low blood glucose levels – hypoglycaemia or “hypo”

A blood glucose level below 4mmol/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 e.g. crying, argumentative outbursts or 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) Never leave a child who has a hypo alone.
- b) Act swiftly. Early treatment will prevent a mild hypo progressing to a severe one. **If in doubt, TREAT.**
- c) Give easily absorbed carbohydrate foods.  
Any ONE of the following:
  - Fruit juice ( $\frac{1}{3}$  to  $\frac{1}{2}$  glass or 125-200ml).
  - Sugar-containing soft drink ( $\frac{1}{3}$  to  $\frac{1}{2}$  can or 125 to 200ml).
  - 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.
- d) Follow up by giving additional carbohydrate food.  
After approximately 10 to 15 minutes, or once a positive response is evident, give some carbohydrate food (bread, biscuits, pasta; equivalent to 1 slice of bread).
- e) Adult supervision is needed until the student has fully recovered

If symptoms improve sufficiently, the student may return to normal activity in approx 15-30 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. After a severe hypo, the child may have difficulty in concentrating for several hours.

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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 injection of medication called Glucagon.

### Remember to:

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

## 2. Physical activity

Regular physical activity 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 physical activity.

### What to do

- Give extra carbohydrate food before sport
- Give additional food for each hour of physical activity (each half hour if vigorous)
- Give extra food after the sport as well, especially if the sport has been particularly vigorous or lengthy
- More supervision is needed during physical activity
- Food/drinks for the treatment of a hypo need to be available on site
- Any sport (e.g. abseiling) 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 sick bay alone or left unattended when feeling unwell. Vomiting is a danger signal. Students with diabetes who are unwell (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. The student can apply for special provision for exams (e.g. Basic Skills Test/HSC) through the Board of Studies in their State or Territory.

During a hypo, brain function is disturbed.

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. A claim for special consideration due to misadventure should be filed.

High blood glucose levels may also affect the ability to concentrate.

### 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 there is appropriate supervision in 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.
- Extra food and snacks when necessary.
- Emergency contact details.

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Emergency phone number 000  
Australian Diabetes Council  
Kids and Teens Careline  
1 300 135 588



A joint initiative of Australian Diabetes Council and International Diabetes Federation