

Diabetes Resource Package

WECD SB - Administrative Procedure
Pr ST:11 Student Health Support (Including
Medication Administration at School)
(Resource Document used with permission by the
Windsor Essex County Health Unit)



Children in School

The following information has been taken from the Canadian Diabetes Association, 2005 Position Statement.

Children with diabetes have the right to be full participants in all aspects of school life. School personnel or other caregivers of children should possess basic knowledge about diabetes and be able to recognize and respond to hypoglycemia and hyperglycemia. Where requested, the Canadian Diabetes Association will work with school boards, administrators, teachers and parents to ensure the delivery of accurate and current information about diabetes, and to assist with the development of policies and programs addressing diabetes management (by proxy. Please see Windsor-Essex County contacts list).

On an ongoing basis, parents or guardians should have a pro-active role in educating their child's teacher(s) and, if possible, classmates, about diabetes and the specific needs of their child. Thus helping to ensure their own comfort with the school's ability to keep their child safe and minimizing anxiety on the part of teachers and students.

Background and Rationale

Children with diabetes are sometimes denied the opportunity to participate in school activities based on incorrect information about the disease.

Diabetes requires ongoing monitoring and attention. Children with diabetes must manage their condition by knowing the warning signs, testing their blood glucose levels, and taking prompt action if necessary. This can be a challenge, especially for very young children, but not an impossibility. Schools have a legal responsibility to protect all children in their care, including those with special health needs. To this end, teachers and other educational personnel must have adequate education, direction and resources. A broader understanding of diabetes enables schools to better safeguard the health of children as well as minimize the anxiety of parents/guardians and school personnel. The Canadian Diabetes Association, as well as members of the Diabetes Health Care Team (where available) can assist with the process of education and resolution of issues.

To protect children with diabetes in schools, clear and regular communication between home and school is mandatory. Topics for discussion should include the need for teachers to be aware of potential warning signs, to encourage proper nutrition, and when necessary, how to respond appropriately. Parents and schools may also wish to discuss the implementation of written care plans for the student and diabetes education programs for teacher and students.

Windsor-Essex County Contacts

In Windsor Essex County, Certified Diabetes Educators are available to assist you through the following programs

- ♦ **Sandi Dennison BScN, RN, CDE**
Diabetes Programme Windsor Essex
Sandwich Community Health Centre
519-254-3402 ext. 114
sdennison@sandwichchc.org
Provides diabetes information to school personnel.
Classroom visits as requested by teacher/parent/child.

- ♦ **Windsor Regional Hospital**
Pediatric Metabolic Outpatient Clinic
Mary Sauve BScN, RN, CDE
519-254-5577 ext. 53403/53453
Child specific health concerns.

- ♦ **Erie St. Clair Community Care Access Centre**
519-258-8211
Physician directed. Community nursing agencies visit schools for insulin administration for special needs children as indicated (age specific).

Glucose (Blood Sugar) Testing at School

Glucose (blood sugar) testing is done by a glucose meter and is an important part of diabetes management.

Glucose testing:

- ♦ Is mandatory for achieving blood sugar levels.
- ♦ Varies with the individual student and is done according to the advice of the student's physician and parent(s).
- ♦ Helps the physician and parent(s) adjust insulin and food intake.
- ♦ Gives early warning signs and symptoms without waiting for the onset of symptoms.

The glucose testing is done by the student with the exception of the very young or special needs students.

In Addition:

The glucose meter should be portable and easily accessible in the classroom. If this is not possible, and hypoglycemia (low blood sugar) is suspected, the student must be accompanied by an adult to the designated area for blood glucose testing as soon as possible.

Glucose (blood sugar) testing should be done whenever symptoms of glucose changes are suspected (see appendix A: Hypoglycemia and Appendix B: What is your blood sugar level?).

The student is allowed to check their glucose (blood sugar) levels and respond to the results as necessary. The bathroom is an inappropriate location for glucose testing. Supervision of the younger student may be necessary to:

- ♦ Read the number and communicate to the parent.
- ♦ Prick the skin with a lancet (in a lancing device) at the fingertip or forearm.
- ♦ Place a very small droplet of blood on the special test strip that has been inserted in the glucose meter.
- ♦ Observe and record the results.

Taking immediate action is important so that:

- 1) Prompt treatment of a suspected hypoglycemic (low blood glucose) reaction is initiated.
- 2) The symptoms do not worsen.
- 3) The student does not miss class time.
- 4) The consequences of low (hypoglycemia) or high (hyperglycemia) blood sugars can be avoided.

Blood sugar levels will change with eating, physical activity, stress or illness.

Sometimes blood sugars fluctuate for no apparent reason.

Glucose Low Blood Sugars (Hypoglycemia)

Can happen to any student on insulin

Low blood sugar is the greatest immediate danger to a student with diabetes.

What causes low sugars?

- ◆ Too much insulin circulating in the body.
- ◆ Not enough food.
- ◆ Delayed snacks or meals.
- ◆ Too much activity not compensated with extra food.

Hypoglycemia Facts

1. Hypoglycemia (low blood sugar) is a fact of life for students with diabetes and using insulin. With proper intervention, the number of episodes can be kept to a minimum, but hypoglycemic reactions are impossible to avoid altogether.
2. If a student is having symptoms of low blood sugar, use the emergency low blood glucose kit which contains fast-acting sugar. In general terms, the blood glucose level is likely to be less than 4 mmol. When in doubt, always treat. Teachers can do no harm by treating, but will put a student at risk by not treating.
3. Sometimes a student is unable to identify the warning signs of low blood sugars. Teachers need to be aware of the signs and symptoms (see Appendix A: Hypoglycemia). The symptoms are very similar to what a person without diabetes would experience if they did not eat all day.
4. Parents should always provide the school with an emergency low blood glucose kit which contains fast acting sugar items such as juice or glucose tablets. Glucose tablets are not a medication.
5. The emergency low blood glucose kit needs to be easily accessible for the younger student. An older student can carry treatment on their person. It is essential that the student be allowed access to the emergency kit as quickly as possible.
6. If a student experiences a severe low blood sugar (unable to take any form of sugar by mouth or is unconscious) 911 needs to be called immediately.
7. It is the parent(s) responsibility to replenish the emergency kit. Parents need to be informed when kit supplies are low.
8. Frequent low blood sugars (more than 2 episodes per week) and/or inappropriate use of the emergency kit or blood glucose meter, needs to be reported to the parents.
9. Parents need to provide personnel with the blood sugar parameters such as when to be notified and how to be reached, (i.e. “if my child’s blood sugar is less than 4.0 mmol or greater than 20 mmol, please notify me at this number”).

High Blood Sugars (Hyperglycemia)

What causes high blood sugars?

- ◆ Not enough insulin in the body.
- ◆ Too much food eaten for the amount of insulin taken.
- ◆ Inactivity.
- ◆ Physical/mental stress, such as illness or death in the family.

When a student experiences high blood sugars (i.e. 15 mmol and up), the student should be encouraged to drink water and have free access to the washroom.

Teachers need to be aware of the signs and symptoms of high blood sugars (see Appendix B: What is your blood sugar level?).

Parents should be notified when blood sugars are severely elevated. They should define the parameters (i.e. greater than 20 mmol) at an initial discussion regarding their child's diabetes.

If a student with diabetes starts vomiting at school notify the parents immediately.

Meal Planning for the Student with Diabetes

Key principles:

- ◆ The student with diabetes can eat just about any type of food.
- ◆ There is no need to reduce caloric intake for the student with Type 1 diabetes.
- ◆ The amount of food eaten needs to match the amount of insulin taken. Too much food can cause high blood glucose levels and too little food can cause low blood glucose levels (Refer to the section on low blood sugar).
- ◆ Snacks and meals need to be timed carefully to match the action time of the insulin that has been injected.
- ◆ The student adjusts insulin according to the amount of carbohydrates consumed at a given meal. Not all students require snacks. Snacking depends on the type of insulin and the individual insulin schedule.
- ◆ The student who misses or delays a meal and/or snack can experience a low blood sugar (hypoglycemia). All food supplied by the parent needs to be eaten.
- ◆ Any concerns regarding nutrition should be discussed with the parents.
For example:
 - Not eating the snacks provided.
 - Frequently hungry after eating.
 - Special food days and treats.

Activities/Field Trips/Special Events

The student with diabetes can participate fully in physical education classes, intramural, before and after school sports, and extracurricular activities.

Changes in school activities need to be addressed so the parents can incorporate special foods into the meal plan and/or adjust the student's insulin.

Extra activity increases the possibility of hypoglycemia (low blood sugar) therefore, the low blood sugar emergency kit and glucose meter need to be accessible to the student at all times.

The student should wear a Medic Alert Identification at all times.

Some schools are part of the No Child Goes Without initiative (see principal for more information).

References

Canadian Diabetes Association (2005). Children in School. Retrieved July 1, 2007, from http://www.diabetes.ca/section_advocacy/advChildren.asp

Insulin for the Student with Diabetes

- ◆ Insulin is a required medication for the student with Type 1 diabetes.
- ◆ Insulin is only given by injection, some students will use an insulin syringe, a pen device, or an insulin pump.
- ◆ Insulin is used to control blood sugar. The only side effect of insulin is a “ low blood sugar”.
- ◆ Each student will have a different daily insulin schedule. Some students may need to take an insulin injection before lunch .

Arrangements will be made by the parent or guardian if the student in your class is not able to self-administer the insulin. Occasionally, a community care nurse with a written order by the student’s physician may be assigned to administer the insulin.

Insulin Pump Therapy

Schools may have more students with Diabetes wearing insulin pumps this year. As of January 2007, the Ontario government is funding insulin pumps for those children and teens that meet the eligibility criteria.

An insulin pump is a device about the size of a pager that is programmed to provide a small amount of rapid-acting insulin (basal) continuously through a small catheter under the skin. The student also takes an additional amount of insulin doses (boluses) through the pump for meals and snacks.

We would like to emphasize that problems with insulin pumps are seldom seen. For the most part, you will not be aware that the student is using an insulin pump, although you may hear an occasional quiet beep when insulin is taken for a meal or a snack.

Blood Sugar Checks

A student wearing an insulin pump will do more blood glucose checks throughout the school day than a student using a syringe or pen device.

Low Blood Sugars

If a student experiences a “severe low blood sugar” and “911” is called, it is important to inform the emergency medical attendants that the student was wearing an insulin pump.

Exercise

During times of vigorous exercise and sports, the student may need to disconnect the pump. For this, the student needs to place the pump in a safe place where it will not be damaged. During prolonged exercise, many students reconnect the pump periodically to take insulin. Some students wear their pump during exercise and use a special case to protect it.

Pump Alarms

Pumps are programmed to alarm under circumstances such as:

- ◆ Low battery
- ◆ No insulin delivery
- ◆ Insulin pump cartridge is low on insulin

In some instances a student may need to contact their parent or guardian when the alarm sounds.