

Standards of Care

for Students with Type 1 Diabetes in School

Purpose:

To acknowledge and clarify the essential partnerships among parents or caregivers, students and school personnel in the care of **students with type 1 diabetes** in the school system.

Goals:

- ♦ To enhance the health, safety and satisfaction with the educational experience for students with diabetes by providing information and direction to all parties regarding diabetes management;
- ♦ To limit anxiety for parents or caregivers and school personnel by encouraging steps to increase communication and cooperation to ensure student safety; and
- ♦ To permit and encourage students to manage their diabetes effectively during school hours.

Key Definitions:

- ♦ **Blood glucose:** The amount of glucose (sugar) in the blood at a given time. People with diabetes self monitor their blood glucose regularly with a glucose meter and work to keep the results within a target range.
- ♦ **Blood glucose monitoring "self-monitoring of blood glucose", "monitoring":** is mandatory for achieving a target blood glucose level. Levels will change depending on food consumption, physical activity, stress, illness, problems with the insulin delivery system and many other unknown factors. A drop of blood is placed on a blood glucose strip which is inserted into a blood glucose meter to obtain a reading.
- ♦ **Diabetes type 1:** Usually diagnosed in children and adolescents, type 1 diabetes occurs when the pancreas is unable to produce insulin. While approximately 10 per cent of people with diabetes have type 1 diabetes, 90 per cent of these are children.
- ♦ **Fast acting glucose:** A carbohydrate to eat or drink for the treatment of mild to moderate hypoglycemia (i.e. juice, glucose tablets).





- ◆ **Glucose:** Is the fuel that the body needs to produce energy. Glucose (sugar) comes from carbohydrates such as breads, cereal, fruit and milk.
- ◆ **Hypoglycemia "low blood glucose":** Is an emergency situation and occurs when the amount of blood glucose (sugar) has *dropped below* an individual's target range. Hypoglycemia can be mild, moderate or severe. Hypoglycemia is most often a result of an individual having injected too much insulin, or eaten too little food, or exercised without extra food.
- ◆ **Hyperglycemia "high blood glucose":** When the amount of blood glucose (sugar) is *higher* than an individual's target range. An urgent response to hyperglycemia may be necessary.
- ◆ **Insulin:** Is a hormone that is required to convert glucose to energy for the body to use. With no insulin, glucose builds up in the blood instead of being used for energy.

Therefore, people with type 1 diabetes must administer insulin by syringe, insulin pen or insulin pump.

- ◆ **Glucagon:** A hormone that raises blood glucose. An injectable form of glucagon is used to treat severe hypoglycemia.
- ◆ **Severe hypoglycemia:** Is a situation requiring emergency response. Severe hypoglycemia *can be life threatening* and often requires treatment with injectable glucagon.
- ◆ **Sharps:** Used syringes and insulin pen needles for insulin administration and lancets for blood glucose monitoring are sharps items that must be disposed of carefully and in appropriate containers.
- ◆ **Target range:** Acceptable blood glucose levels based on the Canadian Diabetes Association's Clinical Practice Guidelines and personalized for the student by the parent or caregiver and the diabetes care team.

Issues of Concern:

- ◆ School-aged children with diabetes most often have type 1 diabetes and require insulin by injection or by an insulin pump.
- ◆ School-aged children with diabetes spend 30-35 hours per week in the school setting; this represents more than half of their waking weekday hours. It is therefore vital that school personnel, parents or caregivers and students are clear and confident in their roles and responsibilities during this time.
- ◆ Diabetes care is unique for everyone. It is important that the needs of each child with diabetes are recognized and accommodated.
- ◆ If school personnel lack accurate information about diabetes and how it is managed, many problems will likely result, ultimately placing the student's health and safety at risk.
- ◆ Hyperglycemia and hypoglycemia will interfere with a student's ability to learn and to participate in school activities.
- ◆ Students with diabetes may occasionally be required to attend medical appointments during school hours and/or be absent to address diabetes concerns.



Roles and Responsibilities:

Communication and Education

It is important that regular and ongoing communication is established between the parties so an effective response is made to changes in activities, special events or snacks at school, or to changes to the student's diabetes management requirements.

Parents/Caregivers or Students

- ◆ Notify the school of their child's diabetes at the onset and arrange a meeting with the school principal.
- ◆ In cooperation with the school, arrange for a regular diabetes education and training in-service for all school personnel who come into contact with the student with diabetes.
- ◆ Student should wear medical identification at all times.
- ◆ If the student is agreeable, arrange for a presentation to be made to classmates about diabetes and how to identify symptoms of hypoglycemia/hyperglycemia.

School Personnel

- ◆ Attend annual diabetes in-service to learn or be reminded on how to identify and treat hypoglycemia/hyperglycemia and the emergency procedures for treating moderate to severe hypoglycemia. Parents or caregivers and diabetes education teams and/or trained healthcare professionals should be invited to participate.
- ◆ Determine the student's *Individual Care Plan* for diabetes. The school principal must meet with the parents or caregivers to discuss the student's diabetes management requirements while in school.

- ◆ Establish a formal communication system with all school personnel who come into contact with the student with diabetes. This should include appointing at least one staff member to notify a parent or caregiver of issues of noncompliance and hypoglycemia/hyperglycemia.
- ◆ Identify the student with diabetes to all school personnel, including supply teachers. This can be done with photographs displayed in the staff room or office and/or emergency information folders made available to all personnel. These folders should contain information about diabetes as well as information specific to the student. Medical alert stickers can also be placed on student files to further identify them.
- ◆ Provide posters identifying symptoms of hypoglycemia/hyperglycemia to all school personnel so they can be posted in key locations throughout the school.
- ◆ Permit flexibility in school rules so that the student with diabetes is able to check blood glucose conveniently and safely, wherever he or she is located in the school. A student must not be left alone or allowed to leave the class alone when low blood glucose is suspected. If the blood glucose is higher than normal, the student may require going to the washroom or water fountain more frequently.
- ◆ Provide adequate supervision at field trips, parties and intramural activities. Students with diabetes can participate in all school activities as long as the proper precautions are taken.
- ◆ Provide reasonable notice to parent or caregiver of any change in school routine or of upcoming special events.

Roles and Responsibilities:

Blood Glucose Monitoring

School personnel can only perform blood glucose monitoring if there is mutual agreement with parents or caregivers and training is provided. This may occur with very young children or children with special needs.

Parents/Caregivers or Students

- ◆ Make treatment decisions based on results of blood glucose monitoring unless they have provided very clear guidelines for the school.
- ◆ Inform school personnel of the cognitive or behavioural effects to the best of their knowledge their child may experience as a result of hypoglycemia/hyperglycemia.

School Personnel

- ◆ Learn the law in the province or territory related to whom is permitted to obtain finger prick.
- ◆ Provide students with a clean, comfortable area and, if preferred by the student, a private location to do finger pricks.
- ◆ Arrange for the safe disposal of sharps.
- ◆ NEVER leave a student alone who is, or suspected to be, hypoglycemic.
- ◆ Notify parents or caregivers of all incidences of hypoglycemia/hyperglycemia.





Roles and Responsibilities:

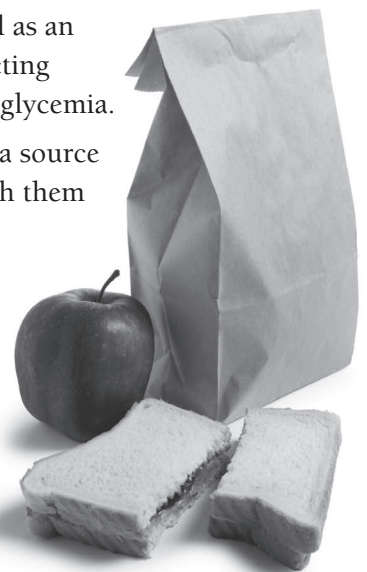
Preventing and Treating Hypoglycemia

Mild to moderate hypoglycemia is common in school. Symptoms can easily be misinterpreted by the student and by school personnel, placing the student with diabetes at serious risk of severe hypoglycemia. It is important the students be treated for their hypoglycemia and not mistakenly corrected for behaviours that may actually be symptoms of low blood glucose. Particularly in the case of teens, school personnel could easily misinterpret symptoms of hypoglycemia or hyperglycemia as fatigue or being under the influence of drugs or alcohol.

Students with diabetes may be physiologically unable to realize an emergency situation. When people with diabetes are either hyperglycemic or hypoglycemic, they are cognitively impaired. It is imperative that a school action plan is in place to quickly treat hypoglycemia before it is an emergency.

Parents/Caregivers or Students

- ◆ Communicate with school personnel the causes, prevention, identification and treatment of hypoglycemia as it pertains to their child.
- ◆ Review annually with the school the student's *Individual Care Plan* for diabetes and the school's emergency procedures for treating moderate to severe hypoglycemia.
- ◆ Provide all snacks as well as an ongoing supply of fast-acting glucose for treating hypoglycemia.
- ◆ Encourage child to keep a source of fast-acting glucose with them at all times.





School Personnel

- ◆ Ensure all snacks and meals are eaten on time. Students also require adequate time to finish their meals. A designated staff member may be required.
- ◆ Permit the student to treat hypoglycemia anywhere, at anytime, and during any activity.
- ◆ Provide safe and readily accessible storage of the student's snack supply.
- ◆ Permit a supply of fast-acting glucose to be situated in several locations throughout the school.
- ◆ Do NOT leave the student alone for at least 30 minutes after the treatment of hypoglycemia or if hypoglycemia is suspected. Once fully recovered, the student can return to regular activities.
- ◆ Ensure the student does not participate in physical education or exams if blood glucose is below or above target limits as identified in student's *Individual Care Plan* for diabetes.
- ◆ Notify parent or caregiver immediately when treatment of moderate or severe hypoglycemia is required.
- ◆ Call 911 when the treatment of severe hypoglycemia is required.
- ◆ Immediately notify parent or caregiver if the student is unable to eat or vomits at school. If the student vomits and parents are unavailable, the student should be taken to the nearest hospital.

Roles and Responsibilities:

Treating Severe Hypoglycemia

Severe hypoglycaemia in the school setting is rare but it is important that staff understand how to respond quickly. Severe hypoglycemia is an emergency situation and often requires the administration of glucagon. School personnel should be trained to administer glucagon, particularly if the emergency response time is not guaranteed to be less than 20 minutes.

Parents/Caregivers or Students

- ◆ Provide for glucagon injection training by a medical professional.

School Personnel

- ◆ Ensure at least two staff are trained to administer glucagon.
- ◆ Provide for and safely store a readily accessible supply of glucagon.
- ◆ Replace glucagon kit by its expiration date.
- ◆ Call 911 and immediately notify parent or caregiver.

Roles and Responsibilities:

Insulin Administration

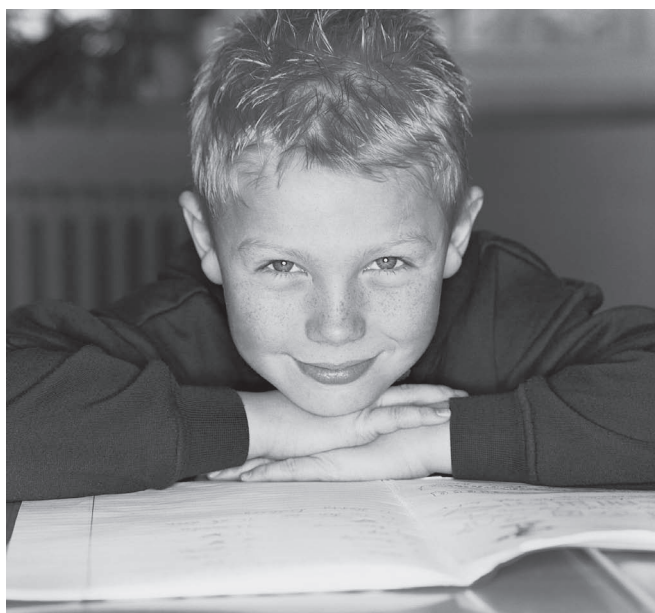
Most students will be taking multiple doses of insulin by syringe, insulin pen or an insulin pump, which they must administer while in school.

Parents/Caregivers or Students

- ◆ Arrange for administering insulin during school hours.
- ◆ Provide training to school personnel if required.
- ◆ Safely dispose of sharps at school.
- ◆ Supply school with a sharps container.

School Personnel

- ◆ Supervise the student if there is mutual agreement with the parent or caregiver and training has been provided.
- ◆ Ensure the student is provided a clean and comfortable environment to administer insulin.
- ◆ Arrange for the safe disposal of sharps.





The Canadian Diabetes Association works in communities across the country to promote the health of Canadians and eliminate diabetes through our strong nationwide network of volunteers, employees, healthcare professionals, researchers, partners and supporters. In the struggle against this global epidemic, our expertise is recognized around the world. The Canadian Diabetes Association: *setting the world standard.*

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