

A Handbook for Type 1 Diabetes Management in Schools

Goal of this Handbook

Managing childhood diabetes is a challenge due to the constant monitoring required, and the child's difficulty in clearly identifying the nature of his/her condition. Meeting this challenge is possible and can be achieved by having a close collaboration between parents and school. This is based on a clear understanding of the roles and responsibilities from both parties.

This handbook clarifies the roles and responsibilities of parents, educators and school administrators to ensure students with Type 1 diabetes are provided with a safe and positive learning environment.

Service requirements for students with diabetes may vary depending on their age and their needs. As such, this handbook provides additional information and recommendations for school personnel and parents.

Because of the immediate risks associated with hypoglycemia and associated long term risks, it is important to recognize the signs of abnormal blood glucose and to be able to act quickly and effectively. Thus, the training of school personnel is a key element to prevent and respond effectively to emergencies.

The Appendix A of this handbook, *Diabetes Management and Emergency Plan*, is intended to facilitate the establishment of a written service agreement plan for between parents and the school.

POLICY 704 - Health Support Services

Policy 704 - *Health Support Services* defines standards and procedures required for the provision of health support services to students while they are the responsibility of the public education system, recognizing this responsibility is shared among parents, the public education system and health care providers.

Diabetes management is considered an essential routine service in Policy 704 – *Health Support Services*. Parents and school personnel are required to follow standards established in the policy.

This handbook does not replace Policy 704, but includes the requirements found in the policy.

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What is Type 1 Diabetes?

- ✓ Type 1 diabetes, usually diagnosed in children, occurs when the pancreas is unable to produce insulin. A person with Type 1 diabetes requires daily insulin injections. In comparison, Type 2 diabetes occurs when the pancreas is unable to produce enough insulin. Type 2 diabetes can usually be controlled by medication and a healthier lifestyle, and does not normally require insulin injections.
- ✓ Good management of diabetes will significantly reduce the likelihood of hypo/hyperglycemia at school, thus reducing the likelihood of administering glucagon.
- ✓ The ability of each student to perform diabetes self-care depends not only on the student's age and maturity, but may also depend on the length of time he/she has had the condition.

Diabetes Management : A Shared Responsibility



A good diabetes management in schools is based on good team work between all involved. Their responsibilities are:

Responsibilities of Parents

In order for students with diabetes to benefit from a safe and positive learning environment, their parents are expected to:

- (a) **Know the policy**
Parents should be familiar with Policy 704 and fulfill their obligations as set out in the policy and this Handbook.
- (b) **Practice appropriate diabetes management**
Parents of students with diabetes are responsible for:
 - decisions concerning treatment;
 - minimizing the school's involvement by ensuring their child's condition is as stable as possible and ensuring that he/she follows the medically prescribed care;
 - calibrating and maintaining the glucometer and insulin pump;
 - programming the insulin pump, changing its parameters and changing the batteries;
 - encouraging their child to inform school personnel when he/she experiences symptoms of hypoglycemia or hyperglycemia;
 - ensuring safe transportation of medication and disposal of items requiring special precautions, such as syringes and sharps; and
 - informing the school in writing of any changes or any relevant information.

(c) **Make a plan**

Parents are responsible for meeting with staff designated by the principal, **prior to the beginning of each school year**, or as soon as possible, to develop/update a written agreement on the services required and the school's and student's (if applicable) respective roles. This information will be recorded and signed by the parent, the principal, the student (if applicable) and the student's diabetes educator or physician.

To facilitate the establishment of a service agreement for a student with diabetes, it is recommended that parents and designated staff use the *Diabetes Management and Emergency Plan (Appendix A)*.

(d) **Attend training**

Parents are responsible for working with the school to meet the school's training needs and to attend the training provided for designated school personnel.

(e) **Provide supplies**

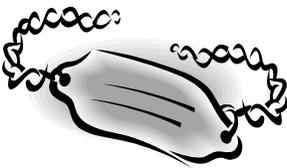
Parents must provide all necessary supplies, equipment and appropriately labelled medication (including glucagon if required), and ensure these are available to the school at all times and replaced prior to their expiration.

Parents must ensure that their child always has access to a kit containing all the elements required for his/her diabetic care (including on the school bus). If a student with diabetes arrives at school without his/her kit, it is the parent's responsibility to ensure the kit is provided to the school as quickly as possible.

For students who require assistance counting carbohydrates, parents are responsible for providing the carbohydrate count for all foods to be consumed at school.

(f) **Provide medical ID**

Parents must ensure their child wears a MedicAlert® bracelet or other suitable identification at all times.



For more information about the MedicAlert® bracelet
visit : <http://www.medicalert.ca>

The provision of health support services is the ongoing responsibility of the parent. Consequently, in requesting the assistance of school personnel in the provision of these services, parents are temporarily delegating limited authority to the personnel of the public education system, for a particular purpose, rather than relinquishing any part of their parental responsibility.

Responsibilities of the Superintendent

The Superintendent will ensure:

- (a) school personnel are familiar with and adhere to Policy 704 and the Handbook for Type 1 Diabetes Management in Schools; and
- (b) school personnel receive appropriate training.

Responsibilities of the Principal

The Principal will:

- (a) **Provide the policy and forms**
Parents of a student with diabetes must be provided with a copy of Policy 704, this document and all applicable forms, as soon as possible.

- (b) **Make a management plan**

Parents must be provided the opportunity to meet with designated staff to develop/update a written agreement (management plan) on the services required for the student. This should occur prior to the beginning of the school year, or as soon as possible, and be updated/ revised if significant changes are required.

To facilitate the establishment of a service agreement plan for a student with diabetes, it is recommended that the principal use the *Diabetes Management and Emergency Plan (Appendix A)*. The plan must include an agreement on the procedures to be followed for the daily management of diabetes and in case of an emergency, it must describe the parent's, school's and student's (when appropriate) respective roles. The plan must be signed by the parent, the principal, the student (if 16 or older) and the student's diabetes educator or physician. Each year, the management plan must be reviewed by the school's principal and the parent. If the service requirements remain the same, only the signatures from the principal and a parent are required to renew the plan. If the service requirements are different from the last plan, a new management plan must be developed.

- (c) **Ensure measures are put in place**
The school principal will ensure measures agreed to, described in the individual student's plan (Appendix A), are put in place. The principal will ensure there is sufficient trained school personnel assigned to provide assistance for the care specified in the plan.

Where appropriate, the school principal should establish an emergency team. The size of the team may vary depending on the size and the structure of the school, the number of students with diabetes and the age group.

(d) Arrange for training (where a student with diabetes attends the school)

Training must be provided at the beginning of each school year or as soon as possible. It is recommended that the following two levels of training be provided:

LEVEL I

All school personnel receive basic information to ensure they:

- can identify students with diabetes by their MedicAlert bracelet or other medical identification;
- recognize the signs of hypoglycemia and hyperglycemia;
- recognize diabetes material;
- know where to find fast-acting sugar; and
- are familiar with the established emergency procedure.

**Participation in training on the administration of glucagon is voluntary for this group.*

LEVEL II

Designated school personnel (including members of the emergency team) receive sufficient training to ensure, in addition to the above, **if required**, they can:

for students in grades K-5 (or as needed)

- verify the amount of food consumed by the student and count carbohydrates;
- supervise the student as he/she calculates and prepares the correct amount of insulin for carbohydrates consumed;
- supervise the student during blood glucose testing;
- supervise the student's self-administration of insulin;
- measure blood glucose with the glucometer;
- replace glucometer batteries;
- put in place other procedures that may be required; and

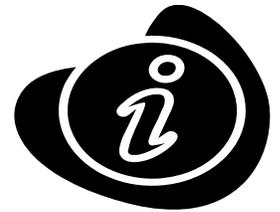
for students in any grade

- carry out the emergency plan including the administration of glucagon, if appropriate.

Managing Type 1 diabetes involves balancing food consumption, insulin injection and physical activities; therefore it is strongly recommended that the student's **physical education teacher** and **bus driver** are among those receiving the Level II training (including the administration of glucagon).

Parents of students with diabetes should also be included in the training.

It is strongly recommended that the services of a trained health professional, such as a diabetic educator or physician be used to provide the Level II training.



For additional information or resources, schools and districts are advised to contact their local diabetic clinic.

*Additional resources:
Canadian Diabetes Association New Brunswick Branch
61 Carleton Street,
Suite 2
1-800-884-4232
Tel:
(506) 452-9009
Fax:
(506) 455-4728*

(e) Arrange for medication and materials management

Medication services will be managed according to the established procedures and the agreed student's management plan. Adequate precautions must be taken to store and handle medications, such as insulin and glucagon, with respect for the particular storage requirements of the medication. A clean location, appropriate to the student's needs must be available to perform blood tests and injections.

For students in grades K-5 (*or as needed*)

- a member of the school personnel should be designated to verify, during the first period of the day, that the student has his/her diabetic kit at school. If the student does not have his/her kit, the parent will be contacted to ensure the kit is provided to the school as quickly as possible; and
- students should not be left unattended to check their blood glucose levels or administer their insulin.

For students who use the school food services

- the principal should make arrangements for parents to count carbohydrates or, if available, obtain a carbohydrate count for foods served in the cafeteria.

(f) Establish a plan for activities / special events

A plan must be in place for special events at the school and other co-curricular or extra-curricular events in order to be prepared for any medical emergencies that may occur.

For students in grades K-5 (*or as needed*)

- parents of students with diabetes should be given advance notice, to the extent possible, of changes to the regular schedule (e.g. field trips, extra physical activities, food-related activities) so that the parent can adjust care accordingly;
- an adult should be designated to ensure the student's care is managed according to his/her plan and ensure the student has his/her diabetes care kit; and
- a copy of the *Diabetes Management and Emergency Plan* should be available on all excursions off school grounds.

(g) Establish a plan for casual employees

Measures must be in place to ensure student safety when the student is under the supervision of a casual employee including a substitute teacher who has not received the appropriate diabetes training. Casual employees must be informed of students with diabetes in their care and must be provided with written instructions concerning the care of each student (when appropriate).

If required, principals may designate a member of the school personnel who can intervene rapidly in case of an emergency.

Responsibilities of Teachers

Teachers are expected to:

- (a) know the identity of students with diabetes in their classroom;
- (b) allow students to eat their snacks and meals according to the care plan;
- (c) allow students to carry out the necessary diabetic care as specified in the *Diabetes Management and Emergency Plan*;
- (d) be able to recognize the signs of hypoglycemia and hyperglycemia and provide assistance; and
- (e) be able to recognize a student's equipment, which is necessary to carry out diabetic care, such as the glucometer, insulin pump, etc.

Emergency Treatment

As per Policy 704 - *Health Support Services*, school personnel have a common law duty of care to assist students during medical emergencies, to the extent of their capabilities and the means available to them.

There are two types of diabetic emergencies which school personnel may encounter:

- low blood sugar level (hypoglycemia)
- high blood sugar level (hyperglycemia).

When dealing with cases of hypo/hyperglycemia, the student's individual emergency plan should be followed. However the following reference tool for hypo/hyperglycemia has been designed to provide all school personnel with signs and procedures in case of such an emergency.

School personnel and others entrusted with the supervision of students with diabetes are expected to be able to recognize the signs of mild to moderate hypoglycemia and hyperglycemia and provide assistance in case of an emergency.

Hypoglycemia – Low Blood Sugar

(4mmol/L or less)

Do not leave a student unattended until completely recovered.

When in doubt, treat with fast-acting sugar.

Signs

- sweating
- trembling
- dizziness
- mood changes
- hunger
- headaches
- difficulty speaking and concentrating
- paleness
- confusion
- extreme tiredness
- blurred vision

WHAT TO DO:

IF THE STUDENT IS CONSCIOUS

If possible, ask the student to test his/her blood glucose.

If not possible or less than 4mmol/L:



Give fast-acting sugar immediately:

(e.g. 4-6oz. of fruit juice or 3 packets of sugar diluted in a little water or 1tbsp of sweetened jelly, honey, corn syrup, jam or equivalent provided by the parent).



Call the parent and follow the parent's recommendations or wait 10 to 15 minutes and recheck blood glucose if possible.



Repeat treatment if symptoms persist or blood glucose is **still less than 4mmol/L.**



Once blood glucose is at 4 mmol/L, give the student a snack comprised of a carbohydrate and a protein (e.g. 4-6 crackers and cheese).

Do not change the time of the next meal or snack.

IF THE STUDENT IS UNABLE TO SWALLOW OR UNCONSCIOUS

Call 911

Don't attempt to give anything by mouth.

Roll the student onto his/her side (if possible).

Contact designated school personnel:

Test blood glucose if possible. If less than 4mmol/L or not possible:



Administer glucagon* as prescribed.

under 44 lb. (20 kg): half the syringe /

over 44 lb. (20 kg): entire syringe

Disconnect the insulin pump (if the student has one).

Call parent / emergency contact.

*Glucagon shall only be administer if prescribed in the student's plan. Only trained school personnel should administer Glucagon.

Hyperglycemia – High Blood Sugar

(14 mmol/L or above)

Do not leave a student unattended

Signs

- dry mouth
- extreme thirst
- frequent urination
- drowsiness
- stomach pain
- blurred vision
- nausea and vomiting
- fruity smell to breath

WHAT TO DO:

In case of mild hyperglycemia (thirst, frequent urination, fatigue), school personnel will:

- Allow free use of the bathroom.
- Encourage the student to drink water only.
- Inform the parent.

In case of increased hyperglycemia (drowsiness, nausea or vomiting), school personnel will:

- Confirm hyperglycemia by testing blood glucose, if possible.
- Call parents/emergency contact immediately to have the child picked up, (the care required in such a case goes beyond the abilities of school personnel).
- If the student is vomiting and it is impossible to reach the parents, **call 911**.

DIABETES MANAGEMENT AND EMERGENCY PLAN
SCHOOL YEAR 2 ____-2 ____

PART I - STUDENT INFORMATION

Name of Student: _____

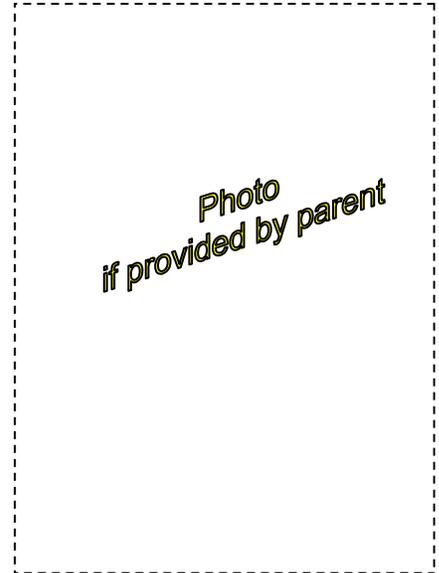
Date of Birth: _____
year / month / day

Medicare Number: _____

School: _____

Home Room Teacher: _____

Designated Staff: _____



Contact information

Mother/Guardian: _____

Telephone: Home _____ Work _____

Cell _____

Father/Guardian: _____

Telephone: Home _____ Work _____

Cell _____

Student's Physician: _____

Telephone: _____

Other/Emergency contact:

Name: _____ Relationship: _____

Telephone: Home _____ Work _____ Cell _____

Notify parents/guardian or emergency contact in the following situations: _____

Any other conditions that may affect the treatment of your child: _____

My child is able to manage his/her diabetic care independently and does not require any special care from the school.

Yes No

If "Yes", go directly to PART III.

PART II - DIABETES MANAGEMENT PLAN (if applicable)

Blood Glucose Monitoring

Target range is: _____

Usual time to check blood glucose: _____

Other times to check blood glucose (i.e. before/after exercise): _____

My child can perform his/her own blood glucose check. Yes No

Parent's responsibilities: _____

School's responsibilities: _____

Student's responsibilities: _____

Additional information: _____

Insulin Injection

For students with insulin syringes/pen:

My child can give own injection. Yes No
My child can determine correct amount of insulin. Yes No

For students with an insulin pump:

My child can calculate and administer correct dose. Yes No

Usual dose: _____

Parent's responsibilities: _____

School's responsibilities: _____

Student's responsibilities: _____

Additional information: _____

Food Management

Regular time for meal and snack: _____

My child can count carbohydrates. Yes No

Parent's responsibilities: _____

School's responsibilities: _____

Student's responsibilities: _____

Instructions when food is provided to the class: _____

Additional information: _____

Diabetes Management Kit

Supplies to be provided by parents and kept at school:

- Blood glucose meters, test strips, and batteries.
- Insulin vials and syringes / or insulin pump supplies / or insulin pen and supplies.
- Fast-acting source of glucose.
- Carbohydrate containing snack (e.g. crackers and cheese).
- Glucagon emergency kit.
- A backup supply of fast-acting sugar.

Kit / Medication Management: _____

Special Events/Other

PART III - EMERGENCY PROCEDURES

Hypoglycemia (Low Blood Sugar)

Usual symptoms of hypoglycemia: _____

Treatment of hypoglycemia: _____

Hyperglycemia (High Blood Sugar)

Usual symptoms of hyperglycemia: _____

Treatment of hyperglycemia: _____

Glucagon

In case of an emergency I agree _____ is to receive
 a Glucagon injection. Yes No name of the student

If yes, weight: _____ Glucagon dosage 1/2 syringe
 entire syringe

PART IV - DESIGNATED SCHOOL PERSONNEL

The personnel listed below have received the necessary training to assist with the diabetes management and emergency intervention described above.

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____

I have verified the instruction concerning ongoing diabetes management and emergency interventions provided to the persons above for the care of this student and find it acceptable.

Diabetes Educator/Health Professional: _____
Signature

Date: _____
year / month / day

Title: _____

PART V - SIGN-OFF

I have read and understand the *Diabetes Management and Emergency Plan* and agree to the care described in this plan and the sharing of information relevant to the service requested with those who must know in order to provide the service.

Student (16 years and older): _____ Date: _____
signature year / month / day

I hereby request and authorize school personnel to provide the care described above to my child. I understand the designated persons have no medical qualifications and will perform the requested service in good faith and within the scope of the training received in accordance with this agreement.

In the event of an emergency, I authorize school personnel to administer the medication specified in this agreement and provided by me, and to obtain suitable medical assistance. I agree to assume responsibility for all costs associated with medical treatment and transportation.

I hereby acknowledge my responsibilities, as set out in this agreement, in Policy 704 - *Health Support Services* and the *Handbook for Type 1 Diabetes Management in Schools* and agree to carry these out to the best of my ability.

I agree to notify the school in writing of any changes to the information provided on this form.

I agree that the information provided on this form will be shared on a need-to-know basis with anyone who will be involved in the care of my child on behalf of the school.

I agree to have relevant information about my child's health/medical condition available in strategic areas of the school (e.g. classroom, kitchen, principal's office, staff room) to assist in providing emergency services to my child. I will provide a photo of my child for this purpose. Yes No

I agree that the principal or his/her designate may contact my child's physician in the event of a medical emergency or should he/she require clarification about the school's responsibilities as set out in this agreement. Yes No

Parent/Guardian: _____ Date: _____
signature year / month / day

I hereby acknowledge and accept my responsibilities and those of my staff, as set out in this agreement.

Principal: _____ Date: _____
signature year / month / day

The care described in this plan is essential and must be provided during school hours. Yes No

I have reviewed the *Diabetes Management and Emergency Plan* for _____ and feel it is appropriate for his/her needs.
name of the student

Diabetes Educator or Physician: _____ Date: _____
signature year / month / day

ANNUAL REVIEW

Note: if the requirements of the service requested have changed, complete a new *Diabetes Management and Emergency Plan*. If there are no changes, use this sign-off sheet to confirm the plan has been reviewed with the parent.

This plan remains in effect for the 2____-2____ school year without change.

Parent/Guardian: _____ Date: _____
signature year / month / day

Principal: _____ Date: _____
signature year / month / day

This plan remains in effect for the 2____-2____ school year without change.

Parent/Guardian: _____ Date: _____
signature year / month / day

Principal: _____ Date: _____
signature year / month / day

This plan remains in effect for the 2____-2____ school year without change.

Parent/Guardian: _____ Date: _____
signature year / month / day

Principal: _____ Date: _____
signature year / month / day

This plan remains in effect for the 2____-2____ school year without change.

Parent/Guardian: _____ Date: _____
signature year / month / day

Principal: _____ Date: _____
signature year / month / day

This plan remains in effect for the 2____-2____ school year without change.

Parent/Guardian: _____ Date: _____
signature year / month / day

Principal: _____ Date: _____
signature year / month / day