

## AP 323 - Support for Students with Type 1 Diabetes (T1D)

### Background

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The purpose of this procedure is to outline staff responsibilities for supporting students with Type 1 Diabetes (T1D). T1D is a disease that occurs when the pancreas is unable to produce insulin. If T1D is not controlled, it is fatal. The meticulous balancing of diet and physical activity with insulin intake is at the core of T1D management as all three affect the student's blood glucose levels.

### Procedures

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#### 1. Information and Awareness

Parents/guardians have the primary responsibility for informing and updating school staff regarding their child's T1D. The child should wear a Medic Alert bracelet or other emergency identification.

##### 1.1 Safety measures a school can be expected to implement are:

- 1.1.1 AP 323-1 Diabetes Support Plan and Medical Alert Information and AP 323-2 Diabetes Medication Administration Form should be kept along with other medical information in the School Health Resource Book.
- 1.1.2 A meeting with the child's parents/guardian to review and update AP 323-1 Diabetes Support Plan and Medical Alert Information and AP 323-2 Diabetes Medication Administration Form at the beginning of each school year.
- 1.1.3 All school staff will be aware of the signs and symptoms of hypoglycemia (low blood sugar) and be aware of the emergency plans for students.
- 1.1.4 All school staff need to recognize the increased danger to the diabetic student if there is more than usual exercise, delay to a meal, smaller than usual meal, change in insulin or if the student has other illnesses or vomiting.
- 1.1.5 Ensure that diabetes supplies (e.g. fast acting glucose, blood testing equipment, insulin and glucagon – if authorized by the parent – and AP 323-1 Diabetes Support Plan and Medical Alert Information are with the student if he/she is on an excursion away from school property.

#### 2. Management of Type 1 Diabetes (T1D) in School

The parent and student (if independent in their diabetes care) have the primary responsibility for managing T1D at school. Parents of students who are not independent in the management of their own

diabetes may choose to have delegated care through Nursing Support Services (NSS) for blood-glucose monitoring, insulin pump supervision and insulin administration.

2.1 Supports that a school can reasonably be expected to implement are:

- 2.1.1 Designate and train specific educational assistants to ensure students with type 1 diabetes have the support they need to manage their diabetes at school.
- 2.1.2 Ensure that students with type 1 diabetes have a clean, comfortable area in the class/school to do blood glucose testing and insulin administration.
- 2.1.3 Provide an appropriate disposal of sharps.
- 2.1.4 Parents who choose a Nursing Support Service delegated care plan agree that the nurse will take responsibility for training, supervising and monitoring the educational assistant(s) in the provision of blood-glucose monitoring, insulin pump supervision or insulin administration.

3. Diabetic Emergency Plan

The parents, in collaboration with the principal and classroom teacher, are responsible for developing AP 323-1 Diabetes Support Plan and Medical Alert Information with the school each year. **If glucagon injections are to be given in the event of severe hypoglycemia the parent must sign page 1 of AP 323-1 Diabetes Support Plan and Medical Alert Information and complete AP 323-2 Diabetes Medication Administration Form.** Parents and school are responsible for following AP 323-3 Emergency Administration of Glucagon for Students with Type One Diabetes (T1D).

3.1 Safety measures a school can reasonably be expected to implement are:

- 3.1.1 Annually discuss and update AP 323-1 Diabetes Support Plan and Medical Alert Information.
- 3.1.2 Ensure a copy of AP 323-1 Diabetes Support Plan and Medical Alert Information be kept in the teacher's day planner and TTOC book.
- 3.1.3 An up to date glucagon emergency kit (if parents agree to this treatment) must be stored in a secure but easily accessible area. Students who are independent in their diabetic care should be encouraged to carry a kit with them at all times.
- 3.1.4 All staff should be aware of the common signs and symptoms of mild to moderate hypoglycemia, including: sweaty, shaky, hungry, pale, dizzy, mood changes, irritable, tired/sleepy, blurry, double vision, difficulty concentrating, confused, poor coordination, difficulty speaking and headache.
- 3.1.5 Staff working with the student should be aware that signs and symptoms of severe hypoglycemia include seizures and unconsciousness.

- 3.1.6 Staff should know that when in doubt:
  - 3.1.6.1 Treat for hypoglycemia with fast acting sugar;
  - 3.1.6.2 If the student is unable to take fact acting sugar orally, (is unconscious or having seizure), call 911 and administer glucagon (if parents have authorized this treatment);
  - 3.1.6.3 Notify the parent or guardian immediately;
- 3.1.7 For more detailed information, consult Standards of Care for Students with Type 1 Diabetes in Schools published by the Canadian Diabetes Association.  
<http://www.diabetes.ca/kidsatschool>
- 3.1.8 For information, provincial forms (Diabetes Support Plan and medical Alert Information Form and Diabetes Administration medication form) and resources, consult the BC Ministry of Education website on Type 2 Diabetes:  
<http://www.bced.gov.bc.ca/health/diabetes/>

## AP 323-1 Diabetes Support Plan & Medical Alert Information

**Instructions:**

This form is a communication tool for use by parents to share information with the school. Students who are receiving Nursing Support Services (NSS) Delegated Care do not need to complete page 3. This form does NOT need to be completed by Diabetes Clinic staff, Nursing Support Service Coordinators or Public Health Nurses:

- Administration of glucagon by school staff
- Administration of insulin by school staff for a student not able to complete the task (NSS Delegated Care)
- Supervision by school staff of a student self-administering insulin who is not yet fully independent in the task (NSS Delegated Care)

Student Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_

School: \_\_\_\_\_ Grade: \_\_\_\_\_ Teacher/Div: \_\_\_\_\_

Care Card Number: \_\_\_\_\_ Date of Plan: \_\_\_\_\_

**CONTACT INFORMATION**

Name (Parent/Guardian 1): \_\_\_\_\_  Call First

Cell: \_\_\_\_\_ Work: \_\_\_\_\_ Home: \_\_\_\_\_ Other: \_\_\_\_\_

Name (Parent/Guardian 2): \_\_\_\_\_  Call First

Cell: \_\_\_\_\_ Work: \_\_\_\_\_ Home: \_\_\_\_\_ Other: \_\_\_\_\_

Name (Other/Emergency): \_\_\_\_\_ Relationship: \_\_\_\_\_

Able to advise on diabetes care:  Yes  No

Cell: \_\_\_\_\_ Work: \_\_\_\_\_ Home: \_\_\_\_\_ Other: \_\_\_\_\_

Have emergency supplies been provided in the event of a natural disaster?  Yes  No

If yes, location of emergency supply of insulin: \_\_\_\_\_

**STUDENTS RECEIVING NSS DELEGATED CARE**

NSS Coordinator: \_\_\_\_\_ Phone: \_\_\_\_\_

School staff providing delegated care:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Parent Name: \_\_\_\_\_

Diabetes Support Plan – Student: \_\_\_\_\_

<b>Medical Alert – Treating Mild to Moderate Low Blood Glucose</b>				
<b>Note: Prompt attention can prevent severe low blood sugar</b>				
<b>Symptoms</b>	<b>Treatment for Students Needing Assistance (anyone can give sugar to a student)</b>			
<ul style="list-style-type: none"> <li><input type="checkbox"/> Shaky, sweaty</li> <li><input type="checkbox"/> Hungry</li> <li><input type="checkbox"/> Pale</li> <li><input type="checkbox"/> Dizzy</li> <li><input type="checkbox"/> Irritable</li> <li><input type="checkbox"/> Tired/sleepy</li> <li><input type="checkbox"/> Blurry vision</li> <li><input type="checkbox"/> Confused</li> <li><input type="checkbox"/> Poor coordination</li> <li><input type="checkbox"/> Difficulty speaking</li> <li><input type="checkbox"/> Headache</li> <li><input type="checkbox"/> Difficulty concentrating</li> <li><input type="checkbox"/> Other:</li> </ul>	<p><b>Location of fast acting sugar:</b> _____</p> <p>1. If student able to swallow, give one of the following fast acting sugars:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>10 grams</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> _____ glucose tablets</li> <li><input type="checkbox"/> ½ cup of juice or regular soft drink</li> <li><input type="checkbox"/> 2 teaspoons of honey</li> <li><input type="checkbox"/> 10 Skittles</li> <li><input type="checkbox"/> 10 ml (2 teaspoons) or 2 packets of table sugar dissolved in water</li> <li><input type="checkbox"/> Other (ONLY if 10 grams are labelled On package):</li> </ul> </td> <td style="width: 50%; vertical-align: top;"> <p><b>OR 15 grams</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> _____ glucose tablets</li> <li><input type="checkbox"/> ¾ cup of juice or regular soft drink</li> <li><input type="checkbox"/> 1 tablespoon of honey</li> <li><input type="checkbox"/> 15 Skittles</li> <li><input type="checkbox"/> 15 ml (1 tablespoon) or 3 packets of table sugar dissolved in water</li> <li><input type="checkbox"/> Other (ONLY if 15 grams are labelled on package):</li> </ul> </td> </tr> </table> <p>2. Contact designated emergency school staff person</p> <p>3. Blood glucose should be retested in 15 minutes. Retreat as above if symptoms do not improve or if blood glucose remains below 4 mmol/L</p> <p>4. Do not leave student unattended until blood glucose 4 mmol/L or above</p> <p>5. Give an extra snack such as cheese and crackers if next planned meal/snack is not for 45 minutes.</p>		<p><b>10 grams</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> _____ glucose tablets</li> <li><input type="checkbox"/> ½ cup of juice or regular soft drink</li> <li><input type="checkbox"/> 2 teaspoons of honey</li> <li><input type="checkbox"/> 10 Skittles</li> <li><input type="checkbox"/> 10 ml (2 teaspoons) or 2 packets of table sugar dissolved in water</li> <li><input type="checkbox"/> Other (ONLY if 10 grams are labelled On package):</li> </ul>	<p><b>OR 15 grams</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> _____ glucose tablets</li> <li><input type="checkbox"/> ¾ cup of juice or regular soft drink</li> <li><input type="checkbox"/> 1 tablespoon of honey</li> <li><input type="checkbox"/> 15 Skittles</li> <li><input type="checkbox"/> 15 ml (1 tablespoon) or 3 packets of table sugar dissolved in water</li> <li><input type="checkbox"/> Other (ONLY if 15 grams are labelled on package):</li> </ul>
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<b>Medical Alert – Giving Glucagon for Severe Low Blood Glucose</b>				
<b>Symptoms</b>	<b>Plan of Action</b>			
<ul style="list-style-type: none"> <li>• Unconsciousness</li> <li>• Having a seizure (or jerky movements)</li> <li>• So uncooperative that you cannot give juice or sugar by mouth</li> </ul>	<ul style="list-style-type: none"> <li>• Place on left side and maintain airway</li> <li>• Call 911, then notify parents</li> <li>• Manage a seizure: protect head, clear area of hard or sharp objects, guide arms and legs but do not forcibly restrain, do not put anything in mouth</li> <li>• Administer glucagon</li> </ul>			
<b>Medication</b>	<b>Dose &amp; Route</b>	<b>Directions</b>		
Glucagon (GlucaGen or Lilly Glucagon)  Frequency: Emergency treatment for severe low blood glucose	0.5 mg=0.5 ml (for students 5 years of age and under)  OR 1.0 mg=1.0 ml (for students 6 years of age and over)  Give by injection: Intramuscular	<ul style="list-style-type: none"> <li>• Remove cap</li> <li>• Inject liquid from syringe into dry powder bottle</li> <li>• Roll bottle gently to dissolve powder</li> <li>• Draw fluid dose back into the syringe</li> <li>• Inject into outer mid-thigh (may go through clothing)</li> <li>• Once student is alert, give juice or fast acting sugar</li> </ul>		

Diabetes Support Plan – Student: \_\_\_\_\_

Level of Support Required for Students not Receiving NSS Delegated Care		
Requires checking that task is done (child is proficient in task):  <input type="checkbox"/> Blood glucose testing <input type="checkbox"/> Carb counting/adding <input type="checkbox"/> Administers insulin <input type="checkbox"/> Eating on time if on NPH insulin <input type="checkbox"/> Act based on BG result	Requires reminding to complete:  <input type="checkbox"/> Blood glucose testing <input type="checkbox"/> Carb counting/adding <input type="checkbox"/> Insulin administration <input type="checkbox"/> Eating on time if on NPH insulin <input type="checkbox"/> Act based on BG results	<input type="checkbox"/> Student is completely independent
<b>Meal Planning:</b> The maintenance of a proper balance of food, insulin and physical activity is important to achieving good blood glucose control in students with diabetes.		
In circumstances when treats or classroom food is provided but not labelled, the student is to:  <input type="checkbox"/> Call the parent for instructions <input type="checkbox"/> Manage independently		
<b>Blood Glucose Testing:</b> Students must be allowed to check blood glucose level and respond to the results in the classroom, at every school location or at any school activity. If preferred by the student, a private location to do blood glucose monitoring must be provided, unless low blood sugar is suspected.		
Frequency of Testing: <input type="checkbox"/> mid-morning <input type="checkbox"/> lunchtime <input type="checkbox"/> mid-afternoon <input type="checkbox"/> before sport or exercise  <input type="checkbox"/> With symptoms of hyper/hypoglycemia <input type="checkbox"/> Before leaving school  Location of equipment: <input type="checkbox"/> With student <input type="checkbox"/> In classroom <input type="checkbox"/> In office <input type="checkbox"/> Other  Time of day when low blood glucose is most likely to occur: _____  Instructions if student takes school bus home: _____		
<b>Physical Activity:</b> Physical exercise can lower the blood glucose level. A source of fast-acting sugar should be within reach of the student at all times (see page 2 for more details). Blood glucose monitoring is often performed prior to exercise. Extra carbohydrates may need to be eaten based on the blood glucose level and the expected intensity of the exercise.		
<b>Comments:</b>  _____  _____		
<b>Insulin:</b> All students with type 1 diabetes use insulin. Some students require insulin during the school day, most commonly before meals.		
Is insulin required at school on a daily basis? <input type="checkbox"/> Yes <input type="checkbox"/> No  Insulin delivery system: <input type="checkbox"/> Pump <input type="checkbox"/> Pen <input type="checkbox"/> Needle and syringe (at home or student fully independent)  Frequency of insulin administration:	Location of insulin:  <input type="checkbox"/> With student <input type="checkbox"/> In classroom <input type="checkbox"/> In office  <input type="checkbox"/> Other : _____  Insulin should never be stored in a locked cupboard.	

## AP 323-2 Diabetes Medication Administration Form

### Instructions:

This form is updated annually to document physician approval regarding the following:

- Administration of glucagon by school staff
- Administration of insulin by school staff for a student not able to complete the task (NSS Delegated Care)
- Supervision by school staff of a student self-administering insulin who is not yet fully independent in the task (NSS Delegated Care)

Student Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_

School: \_\_\_\_\_ Care Card Number: \_\_\_\_\_

Parent/Guardians' Name(s) \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

### Glucagon (GlucaGen® or Lilly Glucagon™)

For severe low blood glucose, give by intramuscular injection:

- 0.5 mg = 0.5 ml for students 5 years of age and under
- 1.0 mg = 1.0 ml for students 6 years of age and over

### Insulin (rapid acting insulin only)

Insulin delivery device:  insulin pump  insulin pen

Note: The following **cannot** be accommodated when insulin administration is being delegated to a school staff person via pump or pen:

- Overriding the calculated dose
- Entering an altered carbohydrate count for foods in order to change the insulin dose
- Changing the settings on the pump
- Deviating from the NSS Delegated Care Plan

**For students using an insulin pen, insulin may be administered at lunchtime only (due to the inability to accurately calculate insulin on board). The method of calculating the dose is as follows:**

- Bolus Calculator Sheet
- Variable dose insulin scale for blood glucose for consistent carbohydrates consumed
- InsuLinx® Meter

Parent/guardian authority to adjust insulin dose for bolus calculator sheet or sliding scale:  Yes  No

**For students using an insulin pump, insulin can be given if needed at recess, lunch and two hours after lunch (as there is an ability to know the insulin on board).**

I agree the student's diabetes can be safely managed at school within the above parameters:

Physician Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Physician Name: \_\_\_\_\_ Clinic Phone Number: \_\_\_\_\_

## **AP 323-3 Emergency Administration of Glucagon for Students with Type One Diabetes (T1D)**

### **Procedures**

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1. The responsibility of the Fraser Health Authority is to:
  - 1.1 Provide group training to identified school staff once per school year in the administration of Glucagon.
  - 1.2 Provide ongoing training through the year to school staff as needed. (i.e. a student with T1D moves into the school or a new T1D student is diagnosed)
2. The responsibility of the school principal is:
  - 2.1 To identify all students in the school with T1D and to inform parents of the opportunity to provide emergency glucagon administration for their child. (See AP 323-1 Diabetes Support Plan and Medical Alert Information)
  - 2.2 To identify school staff to be trained in the administration of glucagon who are:
    - 2.2.1 Regular staff members in the school (not casual or temporary appointments)
    - 2.2.2 Willing to, with training, administer a hypodermic injection to a child in a low blood sugar crisis situation.
  - 2.3 To coordinate with Public Health Nurse a date for staff training for glucagon administration
    - 2.3.1 To develop an emergency protocol with staff following AP 323-1 Diabetes Support Plan and Medical Alert Information to ensure prompt administration of glucagon as required.
    - 2.3.2 To ensure parents have completed AP 323-2 Diabetes Medication Administration Form.
    - 2.3.3 To store the glucagon provided by parents in a secure yet accessible location in the school.
    - 2.3.4 To ensure the parent keeps the glucagon up to date in terms of the expiry date of the medication.
    - 2.3.5 To send a letter of refusal of service to parents who choose to not have their child with T1D participate in the glucagon emergency program (AP 323-5 Letter to Parents Who Do Not Want Glucagon Administration).



3. The responsibility of the parent is:
  - 3.1 To ensure the school is aware of the medical needs of their child with T1D.
  - 3.2 To sign, each year, AP 323-1 Diabetes Support Plan and Medical Alert Information and AP 323-2 Diabetes Medication Administration Form.
  - 3.3 To supply and keep the glucagon up to date in terms of the expiry date of the medication

## **AP 323-4 Letter to Parents Re: Glucagon Administration**

School Letter Head

Date

Parent Address

Dear (Parent Name)

We understand that your child \_\_\_\_\_ has Type 1 Diabetes. One service of the Fraser Health Authority – Public Health Nurse is to train designated staff within the school in the administration of glucagon for your child in case of a critical blood low situation.

If you would like to have our staff trained to administer glucagon, please contact me at the school so a training date can be arranged. Please note that if you choose to have the staff trained in this emergency treatment, it will be your responsibility to complete the “Diabetes Mediation Administration Form” and supply and maintain the glucagon emergency kit to the school.

Please contact me directly at the school by (DATE) if you would like this service for your child. If I do not hear from you by that date I will assume you have chosen to have the standard emergency procedure of calling 911 for your child if a severe blood low occurs.

Yours truly

## **AP 323-5 Letter to Parents Who Do Not Want Glucagon Administration**

Parent Address

Dear (Parent Names)

As you know, the School District and the Fraser Health Authority train designated staff in our schools to administer glucagon to students with Type 1 Diabetes in case of an extremely low blood sugar crisis. It is our understanding that you prefer to have other emergency protocols in place – primarily pro-active blood monitoring and calling 911 for (name of student), and that you choose to not supply glucagon to administer to your child if needed.

If, in the future you would like to have glucagon as an option for (student) as an emergency measure at the school, please contact me directly.

Yours truly

Administrator of the school