

# Kids with Diabetes in School

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1-800-226-8464

## HOW TO REACH US

The Canadian Diabetes Association is the non-profit organization working to prevent diabetes in Canada and improve the quality of life for those affected.

For the branch nearest you, consult our Web site, toll-free information line, your local phone book or the closest CDA division office.

**WEB SITE:**  
**[www.diabetes.ca](http://www.diabetes.ca)**

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# Emergency Treatment for Hypoglycemia

## (Low Blood Glucose)

### The symptoms of low blood glucose may include:

- ▶ Cold, clammy or sweaty skin; pallor; shakiness, lack of co-ordination
- ▶ Irritability, poor behaviour; fatigue; nervousness
- ▶ Excessive hunger; blurred vision or dizziness; abdominal pain or nausea

### At the first sign of low blood glucose, give sugar immediately:

- ▶ 4 oz. (125 mL) of fruit juice/drink (junior juice box)



OR

- ▶ 4 oz. (125 mL) of regular pop (not diet pop)



OR

- ▶ 2-4 glucose tabs



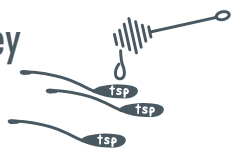
OR

- ▶ 2-3 tsp. (10-15 mL) of sugar (2-3 packets)



OR

- ▶ 2-3 tsp. (10-15 mL) of honey



Wait 10 to 15 minutes.

If there is no improvement, repeat the above treatment.

### DO NOT LEAVE THE STUDENT ALONE.

If the student is unconscious, having a seizure or unable to swallow, do not give food or drink.

- ▶ Roll the student on his/her side
- ▶ Call 9-1-1 or emergency medical services
- ▶ Inform parents or guardians

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## HELPING YOU HELP KIDS DEAL WITH DIABETES

This resource package is for teachers and school personnel, parents and families of kids with diabetes in school. It is part of CDA's national "Kids with Diabetes in School" information and education program. The goal of this program is to ensure the safety and success of a student with diabetes at school.

Managing diabetes is a full-time job for the family and student with diabetes. Teachers and school personnel are in a very special position, and your understanding of the unique needs of the student with diabetes is important. The information in this package will support ongoing communication between the student, the parents and the school.

On behalf of children with diabetes, we hope you find this resource helpful in fulfilling your role.

### 1. How does diabetes affect the body?

- Type 1 diabetes, usually diagnosed in children, occurs when the pancreas is unable to produce insulin. Insulin is essential for ensuring that the body's energy needs are met. Approximately 10 per cent of people with diabetes have type 1 diabetes. The remaining 90 per cent are affected by type 2 diabetes, which occurs when the pancreas does not produce enough insulin or when the body does not effectively use the insulin that is produced. Type 2 diabetes usually develops in adulthood, although recently increasing numbers of children in high risk populations are being diagnosed. Symptoms of diabetes can include unusual thirst, frequent urination, unusual weight loss and lack of energy. If left untreated or improperly managed, the high levels of blood glucose associated with diabetes can result in a variety of complications. Timing of insulin injections, blood glucose monitoring, meals/snacks and exercise are important to maintain balance in blood glucose levels.

### 2. What do I do if the student with diabetes won't eat or finish his or her snack?

- Attempt to address this question with parents during the parent-teacher interview before the student with diabetes begins the school year. Ask parents questions such as: How do they usually handle such a situation? What would they like you to do should it occur? How often could you expect this to occur? Establish a plan for reporting incidents to parents.
- Should the situation occur, remain calm. Attempt to understand the reason for refusal. Could this child be having a low blood glucose reaction? Is it simply a matter of not liking or wanting what was provided? Or is the child ill? Handle the situation as previously discussed with parents.

- Report the incident to the parents or guardian as directed in the parent-teacher interview. You may want to contact the parents or guardian immediately when the child refuses to complete a meal or snack.
- If the situation is repeated, work with parents on strategies such as: teaching the child the importance of eating; reassessing the meal plan with the child's diabetes educator; reminding the student to finish the snack before going out for recess.

### 3. I sometimes forget about a student's snack times. How can I remember?

- Attempts are generally made to schedule snacks and lunch at usual school break times making it easier to remember that the student with diabetes eats when others eat. Ask the parents or guardian if this is possible.
- Ask parents to provide their child with a digital alarm watch. This cues both student and teacher to snack time.

### 4. The student with diabetes is unusually tired before lunch and is unable to concentrate. Could this be low blood glucose? Should I mention this to the parents?

- Ask the student to check his/her blood glucose level, and to treat as necessary (usually a blood glucose of less than 4 mmol/L requires treatment by oral glucose or sugar, juice, glucose tabs, etc.).
- Always inform the parents either by written journal, which students can take to and from home each day, or by phone. Communicate any pattern of signs and symptoms of low or high blood glucose to parents or guardians, as insulin and food adjustments by the family can help to correct this.

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## 5. As the student's teacher, do I have to test his/her blood glucose?

- Teachers are not required to do blood glucose tests but can agree to supervise the student conducting a blood glucose test.
- You may need to supervise younger students when they need to test, such as before lunch or when hypoglycemia is suspected. Determine if the number is below 4 mmol/L, and then assist in treatment.
- You are not required to do the finger-poke.
- If in doubt, treat! If the student is unable to perform the finger-poke procedure and you suspect he/she has low blood glucose, simply provide oral glucose to treat the suspected hypoglycemia. You can't hurt the student if your assumption was wrong, and you have kept the student safe. Of course, let the parents or guardian know about the situation.

## 6. As the student's teacher, do I have to learn to give the student's insulin injection?

- Teachers are not responsible for giving insulin. Most insulin injections are administered outside school hours before breakfast and supper meals and bedtime. Some students do require insulin injected before lunch, but this is the family's and student's responsibility.

## 7. Am I going to be held responsible if something happens to the student with diabetes in my care?

- You are not liable, or to be held responsible, if you do what is "reasonable" under the circumstances. Ensure you allow your student to eat meals and snacks fully and on time, and to treat low blood glucose promptly. Assist the student with diabetes during low blood glucose treatment when necessary.

## 8. Is it appropriate for students with diabetes to do presentations to groups at their school on the topic of diabetes?

- It's a great idea to encourage students with diabetes to explain the condition to other students and teachers. Some students with diabetes will embrace the opportunity and might benefit by earning "Public Service Points" for their efforts. Others might not be interested in sharing their knowledge of diabetes, and this decision must also be respected.

## 9. Should students with diabetes wear diabetes identification?

- Medic Alert™ or other diabetes identification is recommended for all people with diabetes. Many students report being asked by coaches and referees to remove their identification bracelet or neck chain during sports activities to protect other players from injury. The Medic Alert™ sports bracelet has been reportedly more acceptable during sporting events than chain types. In the event that a student is required to remove a Medic Alert™ identification, it is assumed that the coach has made the identification in the process, and therefore will be a supporter of the student when necessary. The medical identification can then be attached to the handles of the student's gym bag or carried by the coach and returned to the student when the event is over.
- Many students dislike wearing diabetes identification but will carry wallet cards identifying them as having diabetes. Often students dislike the very nature of being identified as having diabetes when they feel it is a very private matter. Interact with the student and family to encourage the student to find a Medic Alert™ identification that he or she can wear outwardly and that the student finds acceptable.

**NOTE:** Please refer to *Diabetes and the Duty of Care of School Employees*.

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# Administrator's Checklist

*School administrators should meet with the parents of a student with diabetes before classes begin to discuss the following concerns and issues:*

## 1. Communication/education

- Review relevant information in the CDA *Kids with Diabetes in School* resource package accompanying the *Standards of Care for Children with Type 1 Diabetes in School* (including the *Parent's Checklist* and *Teacher's Checklist*).
- Ensure that parents notify the school regarding special needs or changes in their student's health, lifestyle, or diabetes management (typical signs and treatment of low blood glucose, meal and snack times), emergency contact numbers, etc.

## 2. In-service training for school staff

- Ensure that school personnel in contact with students with diabetes during the school day are adequately prepared to respond effectively to hypoglycemia incidents and other emergency situations (e.g. teachers, substitute teachers, office staff, volunteers, bus drivers, lunchroom supervisors, etc.).
- Facilitate the in-service training using the *Test Your Diabetes Knowledge — Questionnaire, Frequently Asked Questions and Answers, Teacher's Checklist*, "Emergency Procedures" information, *Kids with Diabetes in School Resource List for School Personnel*, etc.

## 3. Blood glucose monitoring/insulin concerns

- Provide a safe, hygienic and private space in the school for students to perform self-blood-glucose monitoring and insulin injections throughout the school day.
- With the assistance of public health department and parents, establish procedures for safe disposal of sharps (injection devices), lancets and testing strips.
- Designate a secure, accessible and appropriate place to store insulin, blood glucose testing supplies and emergency food supplies (meals and snacks).

## 4. On-going communication

- Parents should meet with school administration to update information each year or as needed (e.g. changes in teachers or schools, new information about students' special needs, changes in lifestyle, medication, contact numbers and procedures, etc.).
- Parents should provide information about local support and resources for the school (see *Students with Diabetes Resource List for School Personnel* in the CDA *Kids with Diabetes in School* resource package).
- Parents should provide further education, training and support for any personnel who are unsure or anxious about their role regarding the supervision and care of students with diabetes.

## 5. Prevention, identification and treatment of hypoglycemia

- Parents and school administrators should review the key guidelines concerning the prevention, identification and treatment of hypoglycemia in students with diabetes during the school day (see over).

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# Administrator's Checklist

## Hypoglycemia: Prevention, Identification, Treatment

### A. Prevention:

- School staff must ensure the safety of students with diabetes during special events such as school trips, parties, intramural sports, etc. (specifically: have emergency glucose on hand, watch for signs of hypoglycemia).
- School staff should ensure that the student completes all meals/snacks on time during the school day.
- Parents should tell the school when to contact them (e.g. when the student does not finish meals/snacks; after incidents of moderate or severe low blood glucose; signs of high blood glucose, etc.).

### B. Identification:

- School staff should know the names of students with diabetes.
- Teachers should ensure that the student wears diabetes identification during the school day (including during sports and gym activities).
- Parents should tell the school about any special needs or concerns regarding the health and care of the student. Complete the last page of the CDA publication, *Kids with Diabetes in Your Care — A Practical Guide*.

### C. Treatment:

- Parents should supply the school with enough fast-acting sugar for prevention and treatment of low blood glucose (the school should contact the parents when new supplies are needed).
- Ensure that supplies will be stored in safe, accessible location(s) (gym and other sports areas, homeroom, main office, teacher's room, buses, etc.).
- School staff will let students with diabetes take action to prevent or treat low blood glucose during the school day (relax school rules as required).
- School staff should help students with diabetes when they experience hypoglycemia, as required.

### D. Emergency Procedures:

- Discuss emergency procedures for treating moderate or severe blood glucose.
- Make sure that contact names and numbers are up to date for each student.
- Post emergency procedures and other relevant information in the staff room, school office, gym office, etc. (use the form in the CDA publication *Kids with Diabetes in Your Care — A Practical Guide*.)
- School staff must notify parents immediately after treatment of moderate or severe hypoglycemia.

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# Parent's Checklist

*Parents of students with diabetes should meet with a school administrator before the student begins the school year. This checklist contains items to be covered in the meeting. Parents should ask for a meeting of about 30-60 minutes.*

## 1. Provide information to the school

- Provide the school with copies of the CDA *Kids with Diabetes in School* resource package.
- Provide the school with key information about the student with diabetes, including specific needs and concerns, signs and treatment of low blood glucose, meal and snack times, emergency contact numbers, etc.

## 2. Review school policies

- Educate teachers and other school staff about type 1 diabetes (especially the role of insulin, diet and exercise) and emergency action for hypoglycemia.
- Parents should urge school administrators to talk about diabetes and hypoglycemia guidelines with school staff annually.

## 3. Review blood glucose monitoring/insulin concerns

- Ask the school to find a safe, hygienic and private space in the school for students to do their self-blood-glucose monitoring and insulin injections throughout the school day.
- Discuss the need for safe disposal of sharps (injection devices), lancets and testing strips.
- Ask the school to find a safe place to store insulin, syringes, blood glucose testing supplies and emergency food supplies (meals and snacks).

## 4. Commit to ongoing communication and education

- Meet with school teachers or administrators to review and update information each year or as needed (e.g. changes in teachers or schools, current information about student's special needs, changes in lifestyle, medication, contact numbers, etc.).
- Provide information about local support and resources for the school (see *Kids with Diabetes in School Resource List for School Personnel*, *Test Your Diabetes Knowledge — Questionnaire* for school personnel, etc., in the CDA *Kids with Diabetes in School* resource package).
- Provide education, training and support for any teachers or other school staff who are unsure about their role in caring for students with diabetes.

## 5. Prevention, identification and treatment of hypoglycemia

- The prevention, identification and treatment of hypoglycemia are the key concerns in taking care of students with diabetes during the school day. See guidelines, over.

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# Parent's Checklist

## Hypoglycemia: Prevention, Identification, Treatment

### A. Prevention:

- School staff must ensure the safety of students with diabetes during special events such as school trips, parties, intramural sports, etc. (specifically: have emergency glucose on hand, watch for signs of hypoglycemia).
- School staff should ensure that the student completes all meals/snacks on time during the school day.
- Parents should tell the school when to contact them (e.g. when the student does not finish meals/ snacks; after incidents of moderate or severe low blood glucose; signs of high blood glucose, etc.).

### B. Identification:

- School staff should know the names of students with diabetes.
- Teachers should make sure that the student wears diabetes identification during the school day (including during sports and gym activities).
- Parents should tell the school about any special needs or concerns regarding the health and care of the student. Complete the last page of the CDA publication, *Kids with Diabetes in Your Care — A Practical Guide*.

### C. Treatment:

- Parents should supply the school with enough fast-acting sugar for prevention and treatment of low blood glucose (the school should contact you when new supplies are needed).
- Ensure that supplies will be stored in safe, accessible location(s) (gym and other sports areas, homeroom, main office, teacher's room, buses, etc.). Label food supplies with the student's name and room number.
- School staff will let the student with diabetes take action to prevent or treat low blood glucose during the school day (relax school rules as required).
- School staff should help students with diabetes when they experience hypoglycemia, as needed.

### D. Emergency Procedures:

- Discuss emergency steps for treating moderate or severe low blood glucose.
- Make sure that contact names and numbers are up to date for each student.
- Ask the school to put up emergency guidelines in the staff room, school office, gym office, etc. (use the form in the CDA publication *Kids with Diabetes in Your Care — A Practical Guide*).
- Ask school staff to call you immediately after treatment of moderate or severe hypoglycemia.

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# Teacher's Checklist

*The prevention, identification and treatment of hypoglycemia in students with diabetes are the key concerns in the care of students with diabetes during the school day.*

*Before a student with diabetes begins classes, teachers should meet with school administrators and other teachers to review:*

- the needs of each student with diabetes in their school/classes
- essential information about supervising students with diabetes, including:
  - “Frequently Asked Questions and Answers”
  - “Test Your Diabetes Knowledge — Questionnaire” (a questionnaire for school personnel)
  - CDA guidelines regarding prevention, identification and emergency procedures/treatment for low blood glucose (hypoglycemia) episodes (see: ***Kids with Diabetes in Your Care — A Practical Guide***)
  - School policies, procedures, and expectations regarding supervising students with type 1 diabetes, responding to hypoglycemic episodes, contacting parents and related concerns
  - General daily routine for students with diabetes in your school
  - List of resources (“*Kids with Diabetes in School Resource List for School Personnel*”) for additional information about diabetes
  - 8.5" x 11" flyer, to be updated regularly, includes emergency treatment and contact numbers
- the guidelines for supervising students with diabetes and for responding to hypoglycemia (low blood glucose) episodes (see over).

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# Teacher's Checklist

## Hypoglycemia: Prevention, Identification, Treatment

### A. Prevention:

- Know your role in supervising students with diabetes in your care, including:
  - Know the specific needs and routines of each student (ensure that you have current information from parents and from the school office).
  - Ensure the safety of students with diabetes during special events you are supervising, such as school trips, parties, intramural sports, etc. (specifically: have emergency glucose on hand, watch for signs of hypoglycemia).
  - Ensure that the student completes all meals/snacks on time during the school day.
  - Know when to contact the parents or school administration regarding potential problems or concerns (e.g. when the student does not finish meals/snacks; after incidents of moderate or severe low blood glucose; signs of high blood glucose; any unusual changes in behaviour or attitude, routines, academic achievement, etc.).

### B. Identification:

- Know the names of students with diabetes under your supervision.
- Ensure that students wear diabetes identification during the school day (including during sports and gym activities).
- Know each student's symptoms of low blood glucose.
- Encourage the student to tell you when he/she "feels low."

### C. Treatment/Emergency Procedures:

- Review emergency procedures (specifically your role) for responding to hypoglycemia episodes (e.g. providing fast-acting sugar for treatment of hypoglycemia).
- Know the location of the student's emergency treatment supplies (e.g. homeroom, phys-ed. office, main office, teacher's room, bus, etc.).
- Permit the student with diabetes to take action to prevent or treat low blood glucose during the school day (allow flexibility in class routine and school rules as required).
- Know the emergency contact procedures (including which school personnel are responsible for contacting parents and/or emergency services).

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# Resource List for School Personnel

## Books

Alberta Children's Hospital. *Type 1 diabetes in children: A passport to knowledge* (CD-ROM). Calgary: Savvy Knowledge System Corp., 1998.

Brackenridge, Betty; Richard Rubin. *Sweet kids*. Alexandria, Virginia: American Diabetes Association, 1996.

Daneman, Denis, Marcia Frank. "Students with diabetes mellitus, the teachers role." In *Medical problems in the classroom*, 3rd ed, edited by R. Haslam and P. J. Valletutti. Austin, Texas: Pro Ed, 1996.

Daneman, Denis, Marcia Frank, Kusiel Perlman. *When a child has diabetes*. Toronto: Key Porter Books, 1998.

Elliott, Joanne. *If your child has diabetes: An answer book for parents*. New York: Perigee Books, 1990.

McArthur, Robert. *Children have diabetes too: Learning together as a family*. Calgary: Alberta Children's Hospital, 1986.

Wysocki, Tim. *The ten keys to helping your child grow up with diabetes*. Alexandria, Virginia: American Diabetes Association, 1997.

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# Resource List for School Personnel

## Videos

*Care of children with diabetes in child care and school setting* (video, 20:00 minutes). Lawrence, Kansas: Magic Lantern Communications Ltd., Learner Manage Design Inc., 1990.

*Care of children with diabetes in child care and school settings: Skill testing program* (video, 35:00 minutes). Lawrence, Kansas: Magic Lantern Communications Ltd., Learner Manage Design Inc., 1990.

*Growing and living with type 1 diabetes for teenagers* (video, 13:00 minutes). Toronto: Cameron McCleery Productions in association with Canadian Diabetes Association, sponsored by Eli Lilly Canada, 1996.

*It's time to learn about diabetes: A video on diabetes for children* (video, 18:20 minutes). USA: Jean Betschart, Chronimed Publishing, 1993.

*Living with diabetes: Tips for teachers* (video, 19:00 minutes). Milwaukee, Wisconsin: Maxishare Productions in association with Wisconsin Connection for Children's Hospital of Wisconsin, 1996.

*Note: American publications may make reference to food and blood glucose values using a different measurement system than we currently use in Canada.*

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# Test Your Diabetes Knowledge — Questionnaire

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**The following questions pertain to Kelly, your student with type 1 diabetes. For each question, circle one answer only.**

**1. Type 1 diabetes:**

- a) affects 10% of people with diabetes and usually occurs before the age of 40
- b) is also called “brittle” diabetes
- c) is more serious than other types of diabetes
- d) can be cured with insulin injections

**2. Kelly’s diabetes management involves balancing:**

- a) food and insulin
- b) food, activity and insulin
- c) insulin and exercise
- d) I don’t know

**3. If insulin is not available, the glucose level in the bloodstream:**

- a) increases
- b) decreases
- c) stays the same
- d) I don’t know

**4. Kelly should eat:**

- a) meals and snacks at the same time each day
- b) foods that are natural and contain no sugar
- c) only when hungry
- d) high-protein, low-fat foods

**5. Blood glucose monitoring:**

- a) is done using a blood glucose meter
- b) tells Kelly what the blood glucose level has been for several hours
- c) should be done once per week
- d) I don’t know

**6. Common symptoms of low blood glucose are:**

- a) paleness; shakiness; cold, clammy sweat
- b) increased thirst and urination
- c) loss of appetite and fever
- d) I don’t know

**7. Treatment for low blood glucose is:**

- a) 1/2 can of diet pop
- b) snack of crackers and cheese
- c) fruit juice (4 oz./125 mL) or glucose tabs (2-4)
- d) is kept in the nurse’s office

**8. If hypoglycemia is untreated, Kelly may:**

- a) vomit
- b) lose consciousness
- c) become irritable
- d) all of the above

**9. Kelly comes to you in gym class and says, “I feel low.” You would:**

- a) call the parents
- b) tell Kelly to sit down until (s)he feels better
- c) give some sugar such as a small juice box
- d) have a buddy escort her to the nurse’s office

**10. Today, Kelly is requesting frequent trips to the bathroom and water fountain. You would:**

- a) ask him to wait until the next scheduled break
- b) allow him to go to the bathroom and water fountain
- c) give him a detention for disrupting the class
- d) call his parents

**11. Kelly’s friend comes to tell you Kelly is not well. You find Kelly unconscious and:**

- a) you roll him on his side and call for an ambulance
- b) rub honey on his gums and call his parents
- c) tell him to wake up and drink some juice
- d) I don’t know

**12. The class is having hot dogs for lunch. Kelly:**

- a) should have her regular lunch from home
- b) can have the hot dog, providing it fits into her meal plan
- c) cannot eat hot dogs
- d) I don’t know

**13. Kelly wants to participate on the track and field team. To do this she must:**

- a) always carry some form of fast-acting sugar
- b) know which days the events are scheduled so she can take extra food
- c) take extra insulin
- d) both a and b

**14. Which of the following activities would NOT result in low blood glucose?**

- a) eating extra food at snack time
- b) more activity than usual
- c) throwing away or not eating part of lunch
- d) I don’t know

**15. You should meet with Kelly’s parents to:**

- a) review his usual symptoms of low blood glucose
- b) discuss the preferred treatment for hypoglycemia
- c) be familiar with how often Kelly requires snacks
- d) all of the above

**16. When problems arise at school with Kelly’s diabetes, the first step is to:**

- a) have a parent-teacher conference
- b) have the parents consult Kelly’s doctor
- c) have the parents get advice from the diabetes health care team
- d) all of the above

Based on a questionnaire developed by Allison Husband, CDE; Kelly Grebenc, CDE; Dr. Elaine McKeil, PhD; Dr. Danielle Pacaud, MD; for the “Effectiveness of a CD-ROM in Educating Teachers Who Have a Student with Diabetes.” Bayer Award recipients, DES, 1998.

**SCORING:**

Number correct answers (1 mark each) \_\_\_\_\_

Number “I don’t know” answers ( 0 marks) \_\_\_\_\_

Number incorrect answers ( -1 mark each) \_\_\_\_\_

TOTAL MARKS \_\_\_\_\_

**TOTAL SCORE**

13–16

You will be an effective support person to the child with diabetes in your school.

8–12

You made the mark and have a basic understanding.

3–7

You should consider learning more. Review materials in the resource package and consult with the parents and/or the student. Try the questionnaire again.

# Test Your Diabetes Knowledge — Answers

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# Test Your Diabetes Knowledge — Answers

1. The answer is a).  
Type 1 diabetes differs from other forms of diabetes in that people affected require insulin injections for life. Other types of diabetes may be controlled using a meal plan, exercise and possibly pills called “oral hypoglycemic agents,” or insulin. There is no known cure for diabetes; insulin injections only help to manage it, and so people with diabetes are still at risk for other serious health risks relating to their diabetes.
2. The answer is b).  
Kelly’s diabetes management involves balancing food intake (which raises blood glucose), activity (which generally lowers blood glucose) and insulin (which lowers blood glucose).
3. The answer is a).  
If there is not enough insulin in the blood, the blood glucose will rise, as the body cells are unable to access the blood glucose to store it away or convert it to energy. The glucose circulates in the blood, and the kidneys spill some into the urine.
4. The answer is a).  
Kelly should eat meals and snacks fully and on time. Kelly will have injected a certain amount of insulin in the morning with the expectation that a certain amount of food will follow at certain intervals throughout the day. A dietitian determines the food intake with the student and parents. If some of the food is missed or late, Kelly will be at risk for low blood glucose. The foods may contain sugar or eventually break down to glucose (a sugar) during digestion. The food does not have to be high in protein, low in fat or “natural.” People with diabetes can eat the same foods as anyone else, but to avoid low and high blood glucose they should eat according to the their meal plan.
5. The answer is a).  
Blood glucose monitoring is done using a blood glucose meter. Many students will test 3-4 times a day to obtain information about the balance of their meal plan, food and activity. This information helps them to alter various parts of their plan to help normalize their blood glucose. Blood glucose monitoring also helps the student verify feelings of low blood glucose so he or she can treat appropriately.
6. The answer is a).  
Common symptoms of low blood glucose are paleness; shakiness; cold, clammy sweat. Increased thirst and urination are symptoms of high blood glucose. Loss of appetite and fever would be indications of a viral or bacterial infection just like anyone else can suffer.
7. The answer is c).  
Fruit juice (4 oz./125 mL) or glucose tabs (2-4) are an excellent source of sugar which can be quickly digested to raise the blood glucose fast. In order to prevent the blood glucose from dropping again, students will often follow the treatment in 10-15 minutes with their normal meal or snack. If the scheduled time for the meal or snack is more than an hour away, they may take an additional snack such as crackers and cheese. Treatment juice or tablets should be accessible at all times, in the student’s main classroom and in the administration office for access from other parts of the school and grounds. Students are encouraged to carry treatment with them going to and from school, and at recess in the playground. Diet pop with artificial sweetener does not contain sugar, and would be of no value during treatment of low blood glucose.
8. The answer is d).  
If hypoglycemia is untreated, Kelly may become irritable, vomit and/or lose consciousness. Kelly might also become very confused. It is very unlikely Kelly would get better if left untreated.

9. The answer is c).  
You should give some sugar, such as a small juice box. You could encourage Kelly to check her blood glucose, but if testing is not available then simply give the sugar. Inform Kelly's parents by the means agreed upon during your interview with Kelly's family. Kelly will not get better just by sitting out, and she may become seriously low if made to walk to another room. Have the juice box or glucose tabs accessible wherever gym class is being held.
10. The answer is b).  
You should allow him to go to the bathroom and water fountain. Despite best efforts, blood glucose levels can rise, resulting in thirst and frequent urination. Be discreet in ensuring the student is OK, and discuss with the student's family if the symptoms are persistent or frequent. It is inappropriate to discipline a student for symptoms related to high or low blood glucose.
11. The answer is a).  
You roll him on his side and call for an ambulance. You may be able to rub honey or glucose gel on his gums while you wait for emergency services to arrive. Notify Kelly's parents after you call for the ambulance. After you have determined that Kelly is unconscious, do not try to force food or drink or Kelly may choke or aspirate into his lungs. In remote areas, where emergency services are a distance away, parents may request they or a designate be called first, in order that they can provide the emergency service to the student with an injection of glucagon. This is an acceptable approach, as the objective is to have Kelly awake and alert as soon as possible.
12. The answer is b).  
It is important that Kelly be included in all school activities. If she wants to, Kelly can have the hot dog, providing it fits into her meal plan. Kelly or her parents will be able to determine how to include the hot dog into her lunch and should communicate this to the teacher. If possible, include Kelly early in any line-ups to ensure she gets her meal "fully and on time."
13. The answer is d).  
To participate on the track and field team, she must, among other precautions, carry some form of fast-acting sugar and know in advance when events are scheduled so she can plan and take extra food. She would not be advised to increase her insulin, as this would increase the likelihood of hypoglycemia when increased activity is likely to reduce her blood glucose as well.
14. The answer is a).  
Eating extra food would tend to raise the blood sugar. More activity than usual or missing part of a meal or snack would tend to cause low blood glucose.
15. The answer is d).  
Teachers and a school administrator should meet with parents or guardians to review his usual symptoms of low blood glucose, discuss the preferred treatment for hypoglycemia and be familiar with how often Kelly requires snacks. Refer to the *Administrator's Checklist* in your Canadian Diabetes Association ***Kids with Diabetes in School*** resource package to note other issues for discussion.
16. The answer is d).  
When problems arise at school with Kelly's diabetes it helps to have a parent-teacher conference first. If problems persist it is up to the parents to consult Kelly's doctor or diabetes team. You may feel you would like more information and if so please consult the *Kids with Diabetes in School Resource List for School Personnel* or the Canadian Diabetes Association at 1-800-BANTING.

# Standards of Care for Students with Type 1 Diabetes in School

Abridged from the  
Position Paper of the  
Canadian Diabetes Association  
Prepared by the  
School Standards Implementation Subcommittee  
of the National Service Council

**Know who to turn to**



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**1-800-BANTING**  
1-800-226-8464

# Standards of Care for Students with Type I Diabetes in School

Abridged from the Position Paper of the Canadian Diabetes Association

Prepared by the School Standards Implementation Subcommittee of the National Service Council\*

A new Canadian Diabetes Association position paper makes recommendations for the care of students with type 1 diabetes in the school system. The purpose of setting such standards is to clearly outline the roles and responsibilities of parents, students with diabetes and school personnel.†

The goals are as follows:

- to provide direction and resources to broaden the understanding of all parties;
- to improve communication; and
- to minimize anxiety on the part of parents and school personnel by taking appropriate steps to ensure the safety, health and success of students with diabetes while they are under school supervision.

## Issues of Concern

- School-aged students with type 1 diabetes spend 30 to 35 hours a week in the school setting. This represents more than half of their waking weekday hours.
- School personnel who are knowledgeable in diabetes care can increase students' and parents' satisfaction with the educational experience. Lack of knowledge of diabetes on the part of school personnel can cause apprehension, inappropriate responses during hypoglycemia, restriction of a child's participation in school activities, mistrust, anxiety and poor communication with parents.
- Severe hypoglycemia will occur in 3–8/100 students per year and occur most commonly at night. Severe hypoglycemia is rare in the school setting. Mild to moderate hypoglycemia is common in the school setting.
- Some school-aged students will be taking multiple doses of insulin, which may include some before lunch at school.
- Hypoglycemia and hyperglycemia may interfere with learning and participation in activities.
- Crises can arise from school personnel inaction, misinformation and rigidity in applying rules that are contraindicated in the management of diabetes.

The following points highlight some specific problems that arise out of lack of understanding of diabetes or misinformation.

### *Self blood glucose monitoring*

- There is often no provision for students to adequately perform self-blood glucose monitoring (privacy, sufficient time, hygienic conditions).

### *Mild to moderate hypoglycemia*

- Symptoms of mild to moderate hypoglycemia can be misinterpreted by school personnel.
- The nature of the emergency is often misunderstood, placing a student at serious risk.
- Some students are disciplined or punished for behaviours that are associated with hypoglycemia or hyperglycemia which should be seen as cues to treatment.
- Conflict regarding when and where a student may eat to treat a low blood glucose reaction and who is to supply the treatment (food or gel) can create confusion and delay treatment, placing the student at risk.

### *Severe hypoglycemia*

- Some families expect school personnel to administer glucagon, some to call emergency services.
- Glucagon administration is especially problematic as the procedure is invasive and may exceed the authority set by school policy. Supply and storage issues are complex, training is highly technical, and the procedure is often viewed with anxiety and resistance by people not involved in healthcare.

### *Hyperglycemia*

- Some students are inappropriately disciplined for behaviours associated with hyperglycemia (i.e. requests to go the bathroom or requests for frequent drinks).

The following standards recognize the essential partnerships among the student, family and school personnel.

\*The position paper is based on the Consensus Position Re: Standards of Care for Children with Type I Diabetes in School by Dr. Heather J. Dean and Gen Henderson, unpublished, 1994.

## Communication and Education

Family/Student/School Shared Responsibility	School Responsibility	Family/Student Responsibility
<ul style="list-style-type: none"> <li>• Frequent communication between school personnel and parents is essential, especially for changes in school activity, special events or snacks (including home economics classes), to avoid high or low blood glucose.</li> <li>• Parents and school personnel must regularly review prevention, identification and treatment of low blood glucose, as well as emergency procedures for treating moderate to severe low blood glucose.</li> <li>• Parents are generally the best people to provide specific information about their child/adolescent. A school administrator and identified key school personnel in contact with students with type 1 diabetes must receive education. The school administrator will be responsible for disseminating information to other school personnel.</li> <li>• Diabetes education teams may be involved when language, cognitive ability, behavioural issues or serious psychosocial barriers exist. Diabetes education inservices for school personnel may also be available to support the parent's education of school personnel.</li> </ul>	<ul style="list-style-type: none"> <li>• There must be a formal communication system in place that includes all school personnel who are in contact with the student with diabetes at school.</li> <li>• The student with diabetes must be clearly identified, for example, with a photograph to which all school personnel can refer. A copy of emergency and treatment procedures must be readily available for all staff to refer to.</li> <li>• There must be flexibility in school rules to ensure that the student can prevent or treat low blood glucose. The student may have to eat on the bus, at his or her desk, not participate temporarily in certain activities, ask for assistance, etc.</li> <li>• School personnel are encouraged to seek opportunities to learn more about diabetes.</li> <li>• Students with diabetes can participate in all school activities. The safety of the student must be ensured by providing adequate supervision at such special events as field trips, parties, intramural sports, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Families must strongly encourage their student to wear diabetes identification (e.g. Medic-Alert™) at all times. Diabetes identification speaks when the student cannot, and it provides vital information.</li> <li>• Some students are interested in and willing to do presentations to classmates and participate in “teaching the teachers.” When appropriate, this should be encouraged.</li> </ul>

## Blood Glucose Monitoring

Family/Student/School Shared Responsibility	School Responsibility	Family/Student Responsibility
	<ul style="list-style-type: none"> <li>• School personnel are not expected to participate in blood glucose monitoring unless there is mutual agreement, and separate training has been provided for identified school personnel in contact with very young students or with students with special needs who cannot do blood testing by themselves.</li> <li>• Laws vary from province to province about who is legally permitted to draw blood. Schools should be informed about the laws in their particular province.</li> <li>• Students who are able can do blood glucose monitoring as necessary in a designated area in the school or classroom. Students must be allowed enough time and have access to a clean, private space to test their blood.</li> <li>• Arrangements must be made for safe disposal of lancets and needles. Disinfecting of the blood glucose monitoring areas with appropriate cleaners should be done according to school policy regarding blood and body fluid precautions.</li> </ul>	<ul style="list-style-type: none"> <li>• Parents, not school personnel, are responsible for making treatment decisions based on results of blood glucose monitoring unless a special arrangement is made between the parents and the school personnel.</li> <li>• If parents have arranged for school personnel to make management decisions, it is critical that they provide clear guidelines for prevention and treatment of hypoglycemia.</li> </ul>

# Hypoglycemia (Low Blood Glucose)

Family/Student/School Shared Responsibility	School Responsibility	Family/Student Responsibility
	<ul style="list-style-type: none"> <li>• School personnel must endeavour to ensure that students eat all snacks and meals, fully and on time. <i>This is especially important in elementary schools for younger students and those with special needs.</i></li> <li>• Students must be permitted to take oral glucose to prevent or treat low blood glucose anywhere on school property, on buses or during school-sanctioned activities.</li> <li>• Students should not be left alone for at least 30 minutes after the treatment of low blood glucose. Until the student is fully recovered, he/she should not be left unsupervised. Once the recovery is complete, the student can assume regular classwork. If, however, it is decided that the student should be sent home, it is imperative that he/she is accompanied by a responsible person.</li> <li>• School personnel must contact the parents immediately after treatment of moderate or severe low blood glucose.</li> <li>• School personnel must contact the parents immediately if the student is unable to eat or vomits at school.</li> <li>• Where necessary, arrangements must be made to safely store an accessible supply of glucagon.</li> <li>• The school must provide for safe and accessible storage of the student's food supplies.</li> </ul>	<ul style="list-style-type: none"> <li>• Parents or designates must discuss low blood glucose with school personnel (i.e. causes, prevention, identification, treatment). This must include highlighting special signs or characteristics in the student.</li> <li>• Parents or designates must review emergency procedures for treating moderate to severe low blood glucose annually and as needed with school personnel (e.g. new staff).</li> <li>• Parents or designates must provide an extra snack as well as a constant supply of fast-acting sources of sugar at school to prevent and treat low blood glucose. Supplies must be kept in several locations throughout the school, such as the homeroom, gym, principal's office and teachers' room as mutually agreed upon by the family/student and the school.</li> <li>• Oral glucose is not considered a medication. If this is contentious, a blanket consent form (which authorizes the school to give the oral glucose) can be provided by the parents at the beginning of the school year.</li> <li>• School personnel are not responsible for treating severe low blood glucose with glucagon. <i>In exceptional circumstances</i> (e.g. in isolated areas where emergency medical services may be unable to respond quickly enough and where school personnel agree), parents or designates may provide training in how to inject glucagon. In these unusual cases, parents must provide and replace a glucagon kit with the expiry date clearly marked.</li> </ul>

## Insulin Administration

Family/Student/School Shared Responsibility	School Responsibility	Family/Student Responsibility
	<ul style="list-style-type: none"> <li>• School personnel are not responsible for giving insulin injections.</li> <li>• School personnel must ensure that the student has time and a clean, private space to self-inject insulin if necessary.</li> <li>• School personnel must make arrangements for the safe storage of insulin and syringes/pens if necessary.</li> <li>• School personnel must arrange for the safe disposal of lancets, syringes, test strips, etc. This may mean that a container for sharps is provided by a school nurse or parents, or that the student transports sharps home for disposal.</li> </ul>	<ul style="list-style-type: none"> <li>• If the student requires insulin during school time, the student and family are responsible for performing this aspect of diabetes care.</li> <li>• Family and student must safely dispose of sharps at school or transport sharps home for disposal.</li> </ul>

### Know who to turn to



**1-800-BANTING**  
1-800-226-8464

## DIABETES AND THE DUTY OF CARE OF SCHOOL EMPLOYEES

In all jurisdictions in Canada there is legislation governing education which sets out the duties of teachers and other school board employees. In general, the legislation does not prescribe positive duties to administer medical treatment. However, each statute does require that school board employees adequately supervise the students under their care.

Some statutes explicitly require teachers or principals to monitor the health or safety of students. For example, the Ontario *Education Act* provides that a principal has a duty “to ... give assiduous attention to the health and comfort of the pupils ...” Similarly, the Nova Scotia *Education Act* requires teachers to “attend to the health, comfort and safety of the students.” The Prince Edward Island *School Act* requires both teachers and principals to attend to the health, comfort and safety of students.

In our view, these and related provisions in the provincial education statutes impose an obligation on school administrators to assist in or manage medical treatment where doing so is in the best interests of the student, is reasonable, and can be carried out with no training or special skills. There does not appear to be any prohibition on the delegation of this task to teachers, or even non-teaching personnel, such as a school secretary.

In an emergency situation, the common law generally provides that a person who attempts in good faith to assist someone in peril exposes

himself to potential civil liability if he bungles the attempt. On the other hand, a person who stands idly by without lifting a finger incurs no liability. Thus, there is no general civil duty to render assistance to individuals in danger.

In our view, however, the general principle which encourages passive inaction does not apply to the special relations between a school and its students. Our courts have held that a school has a special responsibility towards its students which, we believe, imports an additional obligation to engage in positive conduct for students’ benefit in an emergency situation.

At common law, the standard of care which a teacher is expected to show towards a child under his or her charge is such care as would be exercised by a reasonably careful or prudent parent. This standard of care requires, in our view, no more than would be reasonable in the particular circumstances having regard to the relationship between teacher and student.

Our courts have held that a person who makes a reasonable decision as to a course of action in an emergency will not be treated as having acted negligently if the course of action ultimately turns out to be wrong. All that is necessary is that the decision was not unreasonable, taking the exigencies of the particular situation into account. There is no absolute standard of care, but rather the standard of care varies according to the circumstances and the risk involved.

### Know who to turn to

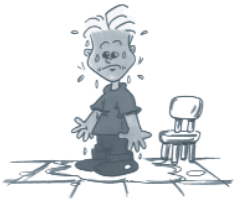


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# SIGNS AND SYMPTOMS OF *Hypoglycemia*

## Low Blood Sugar



sweating



trembling



dizziness



mood changes



hunger



headaches



blurred vision







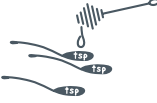
extreme tiredness and paleness

# EMERGENCY TREATMENT FOR *Hypoglycemia*

## Give Sugar Immediately

LOCATION OF SUGAR TREATMENT     ON STUDENT     OTHER \_\_\_\_\_

SELECT ONE TREATMENT FROM THE FOLLOWING:

- ◆ 4 oz. (125 mL) of fruit juice/drink (junior juice box)  OR
  - ◆ 4 oz. (125 mL) of regular pop (not diet pop)  OR
  - ◆ 2-4 glucose tabs 
- OR
  - ◆ 2-3 tsp. (10-15 mL) of sugar (2-3 packets) 
  - OR
  - ◆ 2-3 tsp. (10-15 mL) of honey 

Wait 10 to 15 minutes. If there is no improvement, repeat the above treatment.

### DO NOT LEAVE THE STUDENT ALONE.

**If the student is unconscious, having a seizure or unable to swallow, do not give food or drink.**

- ◆ Roll the student on his/her side
- ◆ Call 9-1-1 or emergency medical services
- ◆ Inform parents or guardians

Please update annually or as needed.

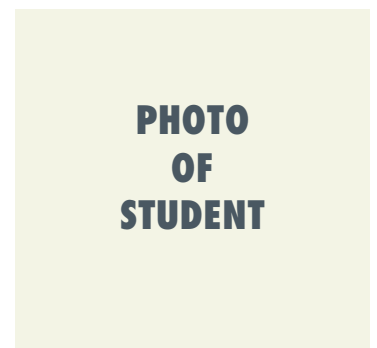
PARENT  
 h \_\_\_\_\_  w \_\_\_\_\_ date \_\_\_\_\_

Student's name: \_\_\_\_\_

PARENT  
 h \_\_\_\_\_  w \_\_\_\_\_ date \_\_\_\_\_

Class: \_\_\_\_\_

OTHER  \_\_\_\_\_



### Know who to turn to





## LETTER OF AGREEMENT

Child's Name: \_\_\_\_\_

**Parent:**

I agree to carry out reliably the parent's responsibilities as listed in the *Standards of Care for Students with Type 1 Diabetes in School*.

I give my consent for the staff of \_\_\_\_\_ School to execute the school's responsibilities as outlined in the Standards.

In the event of an emergency (severe hypoglycemia incident), I authorize the school staff identified to obtain emergency services and to authorize such emergency treatments as is necessary. I agree to assume responsibility for all costs associated with medical treatment.

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

Date: \_\_\_\_\_

**School Administrator:**

The school personnel have reviewed and will carry out the responsibilities listed in the Standards associated with the care of \_\_\_\_\_.

The school personnel have reviewed the material in the *Kids with Diabetes in School* resource package provided by the parent and prepared by the Canadian Diabetes Association.

The following school personnel are identified as key contacts with the above-named student:

NAME

POSITION

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

School Administrator: \_\_\_\_\_

Date: \_\_\_\_\_

\*This form is to be completed **annually** in conjunction with a review of the child's personal information found on the last page of the Canadian Diabetes Association's publication called *Kids with Diabetes in Your Care — A Practical Guide*.

15 Toronto Street  
Suite 800  
Toronto, Ontario  
Canada M5C 2E3  
Tel: (416) 363-3373  
Fax: (416) 363-3393

15, rue Toronto  
Bureau 800  
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Tél : (416) 363-3373  
Télé. : (416) 363-3393

# Know who to turn to



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**1-800-BANTING**  
1-800-226-8464

*Your experience using this kit is very important to us. Please take the time to complete this brief evaluation form.*

**Please indicate your position.**

- Family/Guardian of student with diabetes       Teacher       School Administrator  
 School Health/Public Health       Other \_\_\_\_\_

**1. Did the *Standards of Care for Students with Type 1 Diabetes in School* meet your needs?**

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**2. What parts of this resource kit did you find most useful?**

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**3. How have you used this kit?**

- for general information about children with diabetes  
 to assist in planning care and management of a specific student with diabetes  
 other \_\_\_\_\_

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**4. How could we improve this resource kit?**

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**5. Where is the resource kit stored?**

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**6. How did you hear about this resource kit?**

- School Teacher or Principal       School Health Nurse       Diabetes Education Centre  
 Doctor's Office       Canadian Diabetes Association       Other \_\_\_\_\_

Thank you!

Please return completed forms to: **Canadian Diabetes Association  
Client Relations & Services**

15 Toronto Street, Suite 800  
Toronto, ON M5C 2E3

Telephone: (416) 363-0177  
Facsimile: (416) 214-1899