AVON MAITLAND DISTRICT SCHOOL BOARD
ADMINISTRATIVE PROCEDURE
NO. 316

SUBJECT: MANAGEMENT OF STUDENTS WITH DIABETES

Legal References: *Education Act: Section 265 (1) (j) Duties of Principal: Care of Pupils Ontario Regulation 298 Section 20 (g) Duties of Teachers: Ensure Reasonable Safety Procedures; Ontarians with Disabilities Act 2001 (ODA); Bill 03 Standards for Anaphylactic Students; Ministry of Education Policy/Program Memorandum No. 81 Provision of Health Support Services in School Settings*

Related References: *Administrative Procedure 180 Medical Emergencies and First Aid; AP 218 Food and Nutrition; AP 315 Medication: Oral Administration; AP 370 Ontario Student Record; AP 589 Transportation; Avon Maitland District School Board Annual Accessibility Plan; Form 314 Medically-At-Risk Student's Resource Book*

1. **The Needs of Students with Type 1 Diabetes**

The director of education has developed this administrative procedure to provide information, direction and procedures for managing the health and safety needs of students with Type 1 diabetes.

2. **Background Information**

2.1 The education system, along with families and health professionals, is a partner in the task of ensuring the maintenance of healthy development and management of associated risks for children and youth with diabetes. The Avon Maitland District School Board believes that the provision of relevant student health information and the administration of medical treatment to students are primarily the responsibility of the student's parent(s)/guardian(s).

2.2 Each school principal, shall ensure that there is a mechanism to identify students with diabetes. This mechanism may vary among schools and between panels.

2.3 In consultation with parent(s)/guardian(s), the learning services consultant and/or health professionals, each school shall be responsible for developing a plan for managing the medical needs of each student with diabetes.

2.4 This plan shall be developed in conjunction with parent(s)/guardian(s) and with health professionals. The plan shall be implemented in the best interest of the student, shall be reasonable, and shall be able to be carried out with minimal training.

2.5 Some students may be able to manage their diabetes with greater independence.

2.6 Treatment decisions, based on results of glucose monitoring, must be carried out by parents as outlined in the student's Individual Management Plan.

3. Procedure

3.1. Prevention and Proactive Strategies

3.1.1 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.

3.1.2 All school personnel working with a student with diabetes should be familiar with the needs of the student with regard to his/her diabetes.

3.1.3 All school personnel working with a student with diabetes should be familiar with the guidelines for supervising students with diabetes and for responding to hypoglycemia episodes as outlined in the Individual Management Plan.

3.1.4 All reasonable precautions shall be taken to provide a safe environment for students with diabetes, with consideration that it is not possible to provide an absolute guarantee or elimination of all risks.

3.1.5 Potential risk factors for hypoglycemia include: missed or delayed meals/snacks, overexertion, changes in daily routine, special days and events at school, extended school days, fatigue, increased stress, infection or illness.

3.1.6 Note the signs and symptoms of hypoglycemia and know the appropriate response.

3.2. Identification

3.2.1 At the time of registration at school, all parent(s)/guardian(s) are required to file a routine medical emergency questionnaire, and to verify or amend the form annually and when the medical needs of the student change.

3.2.2 Detailed information must be provided, including:

a) identification of the condition, including signs and symptoms;
b) the authorized medical intervention; and
c) relevant consents of parent(s)/ guardian(s).

3.2.3 Parent(s)/guardian(s) with children with diabetes shall advise the school principal and provide information regarding:

a) triggers for the hypoglycemia;
b) treatment protocol, signed by a health care professional (e.g. dietitian, physician, nurse clinician)
c) any changes in the child's condition; and
d) permission to post medical information and/or photographs in key locations (while respecting issues of personal privacy).

3.2.4 The school will maintain a file including an Individual Management Plan and relevant correspondence in the OSR of students with diabetes.

3.2.5 A "Medically-at-Risk" symbol shall be affixed to the top right hand corner of the student's O.S.R. in order to facilitate access to the Individual Management Plan and to provide a foundation for the annual verification by the parent(s)/ guardian(s).

3.2.6 A clearly visible display area must be maintained in the school office and/or staff room showing medically-at-risk students attending the school.

3.2.7 Procedures to properly inform supply teaching and support staff, as well as teaching staff doing on-calls, must be put in place.

3.2.8 Materials for implementing the Individual Management Plan should be kept in a clearly identified and secured area for quick access. Each student should have ready access to his/her own equipment/materials and all staff involved with the student should be aware of the designated location.

3.2.9 Parent(s)/guardian(s) are responsible to provide an up-to-date supply of necessary food and/or materials. An emergency supply should also be kept on the school bus. Unused food and/or materials must be returned at year's end to the family of the student with diabetes.

3.2.10 Designated containers for safe disposal of sharps can be obtained free of charge from local pharmacies.

3.2.11 At the start of each school year, the school principal shall ensure that appropriate health professionals (e.g. Canadian Diabetes Association) provide staff training, as necessary.

3.3 Individual Management Plan

3.3.1 An Individual Management Plan is required for students diagnosed with Type 1 diabetes. Procedures must address the age and maturity of the student, the daily management of the diabetes (balance regarding daily activities, nutrition, etc.).

3.3.2 The Individual Management Plan is developed through a collaborative process, involving the parent(s)/guardian(s) of the student, medical personnel, the principal, school staff, learning services consultant and community partners where appropriate.

3.3.3 For schools on Balanced School Day schedules, individual management plans may require snacks at times other than scheduled nutrition breaks.

3.3.4 The Individual Management Plan, signed by an appropriate health care professional and the parent/guardian, provides the authority for the intervention. If on annual review there is no change in the plan, the signature of the parent/guardian provides this authority.

3.3.5 A health care professional may be requested to demonstrate the correct procedures for intervention or treatment if necessary.

3.3.6 Components of the Individual Management Plan must include:

a) student information (including date of birth, doctor, health card number);
b) identification of the student's medical condition;
c) prevention/ avoidance strategies;
d) individualized emergency protocol including education, dissemination of information, and staff responsibilities;
e) record of administration of any treatment.

3.3.7 The Individual Management Plan emergency protocol will include procedures to:

a) communicate the emergency rapidly to staff designated to respond;
b) telephone 911;
c) telephone the persons listed in the notification section of the Individual Management Plan
d) Emergency preparedness measures for occurrences that could interfere the normal operation of the Individual Management Plan (e.g. inclement weather, lockdown, bus delay or breakdown)
e) assign a staff person to follow and stay with the student until a parent/guardian arrives (the assigned staff person should bring to the hospital: any medication/ dispenser, documentation of the administration of any medication, and the Individual Management Plan);
f) file a copy of each incident report with the Individual Management Plan.

3.4 Review of the Individual Management Plan

3.4.1 In the event of an emergency, an evaluation of the procedure or protocol shall be undertaken. Changes may be made in consultation with parents/guardians

and medical personnel in response to the emergency and staff notified of the changes.

3.4.2 The Individual Management Plan for each student with diabetes shall be **reviewed annually**, or when the student's condition changes.

3.4.3 When the student with diabetes changes schools, or moves from the elementary to secondary panel, the plan shall be transferred with the O.S.R. Prior to the student's first day of attendance at the new school, the sending school in consultation with the parent(s)/guardian(s) must make the new school aware of the Medical Management Plan and its contents. A review would then be conducted with staff at the new school, so that the necessary information is available, by the first day of attendance.

3.5 Classification/Dissemination of Information

3.5.1 At the start of the school year, all students with diabetes attending the school shall be identified to all appropriate staff members including the location of the student information board and the location of necessary equipment/supplies.

3.5.2 The Board requires a bus company to direct its drivers to respond to a medical emergency with respect to a medically-at-risk student riding their vehicles.

3.5.3 A minimum of two staff members should be trained in the prevention and emergency response measures.

3.5.4 The principal will co-ordinate with local health agencies, the development, management and delivery of training concerning the specific health condition of the student with diabetes. Parent(s)/guardian(s) of students with diabetes may wish to be involved in this training.

3.6 General Guidelines

3.6.1 School personnel are not expected to participate in blood glucose monitoring or testing.

3.6.2 School personnel are not responsible for giving insulin injections.

3.6.3 Parent(s)/guardian(s) are responsible (not school personnel) for making treatment decisions based on results of blood glucose monitoring.

3.6.4 School personnel, under the direction of the school principal, are responsible for ensuring students are able to do blood glucose monitoring as necessary in a designated area in the school or classroom with sufficient time, privacy, and space.

3.6.5 School personnel, under the direction of the school principal, are responsible for directing the safe disposal of lancets and needles and for maintaining a safe (clean and disinfected) area for blood glucose monitoring.

3.6.6 During special activities or sports tournaments where supervisors are not aware of the medical needs of students with diabetes, schools must designate a staff member or adult volunteer, who will be assigned to monitor and respond to the needs of students with diabetes.

3.6.7 Children with diabetes are often the best judges of when they need to eat and should be supported when they identify that it is necessary to do so.

3.7 Mild to Moderate and Severe Emergency Responses

3.7.1 The following chart is a sample list and should not be considered exhaustive. Please refer to the Individual Management Plan for specific treatments and responses for individual students.

LOW BLOOD SUGAR (Hypoglycemia)	MILD	MODERATE	SEVERE
CAUSES	• Insufficient food due to delayed or missed meals • More exercise or activity than usual without a corresponding increase in food, and/or • Too much insulin		
SYMPTOMS	Headache Stomach ache Pale skin, cold, clammy Hunger Sweating Shaking Fatigue Weakness Numbness in lips or tongue Crying Irritability Blurred vision, dizziness	Droopy eyelids Sleepy Erratic behaviour Slurred speech Loss of coordination Confusion Staggering Poor behaviour Deterioration in printing or writing	Unable to swallow Combativeness Uncooperativeness Convulsions Fainting Unconsciousness
TREATMENT	½ cup juice 3 Glucose tablets 2 teaspoons of honey 2 teaspoons or 2 packets of sugar 1/3 cup regular pop (not diet)		Emergency Medical response -roll student onto side - call to 911 - call parent/guardian

3.7.2 It may take some coaxing to get the child to eat or drink but staff must insist.

3.7.3 If there is no noticeable improvement in 10 to 15 minutes, repeat the treatment. When the child's condition improves, he or she should be given solid food. This will usually be in the form of the child's next regular meal or snack.

3.7.4 Until the child is fully recovered, he or she should not be left unsupervised. Once the recovery is complete, the child can resume regular class work. If, however, it is decided that the child should be sent home, it is imperative that there is responsible adult person at home to accompany him or her.

3.7.5 Parents may request to be notified of all incidents of hypoglycemia to assist them in making appropriate adjustments to insulin levels. Repeated low blood glucose levels are undesirable and unnecessary and should be drawn to the parent's attention so that they can discuss the problem with their doctor.

3.7.6 If unsure whether the child is hypoglycemic, **always give sugar!** A temporary excess of sugar will not harm the child but hypoglycemia is potentially serious.

3.7.7 **Do not give food or drink if the child is unconscious. Roll the child on his/her side and seek medical assistance immediately.**

3.8 Responsibilities

See Resource Guide for Management of Students With Diabetes (Appendix A).

APPENDIX A

RESOURCE GUIDE
For Management of Students with Diabetes

RESPONSIBILITIES CHECKLIST

Communication and Education

Family/Student/School Shared Responsibilities:

- Frequent communication between school personnel and the family is essential, especially for changes in school activity, special events or snacks, to avoid high or low blood glucose
- Parent(s)/guardian(s) 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
- Parent(s)/guardian(s) hold responsibility for ensuring the school administrator has all specific information about the student's medical needs
- The school administrator will be responsible for disseminating information to all school personnel
- Diabetes education teams and/or trained healthcare professionals may be involved when language, cognitive ability, behavioural issues or serious psycho-social barriers exist. Diabetes education in-services for school personnel may also be available to support the parent/guardian's education of school personnel

Parent(s)/Guardian(s) and Student Responsibilities:

- Parent(s)/guardian(s) should make every reasonable effort to encourage their child with diabetes to wear diabetes identification (i.e., Medic Alert) at all times. Emergency medical identification speaks when the student cannot and provides vital information.
- Parent(s)/guardian(s) should encourage their child with diabetes to be a self-advocate and to support the education of others regarding diabetes. Some students are interested in and willing to do presentations to classmates and participate in "teaching the teachers". When appropriate, this should be encouraged.

School Responsibilities:

- The school administrator will establish and maintain a clearly visible display area in the school office and/or staff room showing students with diabetes who attend the school
- The school administrator will acquire consent to post medical information and/or photographs in key locations (while respecting issues of personal privacy) about students with diabetes
- The school administrator must identify clearly the student with diabetes with information and/or a photograph and with a description of the signs and treatment procedures posted in the school office and/or staff room.
- The school administrator will ensure that an Individual Management Plan is implemented, filed in the OSR, reviewed annually
- The school administrator must implement a formal communication system that includes all school personnel who are in contact with the student with diabetes
- The school administrator will coordinate with appropriate health professionals to provide staff instruction, as necessary, and demonstrate the appropriate intervention if necessary
- The school administrator will ensure that appropriate notification to the transportation services (AMDSB Transportation and bus company) is made to direct drivers in the appropriate response to a medical emergency for a student with diabetes
- The school administrator will ensure there is flexibility in the school rules to enable the student with diabetes to prevent or treat low blood glucose. The student may need to eat on the bus, eat or drink in his/her classroom, not participate temporarily in certain activities, ask for assistance, etc.

- The school administrator should ensure appropriate training and/or resources are made available to school staff to learn more about diabetes in order to support the student with diabetes medically, socially, academically, and emotionally.
- The school administrator must ensure adequate supervision of the student with diabetes during regular and special events, such as field trips, parties, intramural sports, etc.
- The school administrator will ensure the parent(s)/guardian(s) of students with diabetes provide detailed information about the student's condition, including signs and symptoms and authorized interventions.

Blood Glucose Monitoring

Parent(s)/Guardian(s) and Student Responsibilities:

- Parent(s)/guardian(s), not school personnel, are responsible for making treatment decisions based on results of blood glucose monitoring

School Responsibilities:

- School personnel are not expected to participate in blood glucose monitoring in any more than a supervisory capacity.
- The school administrator will ensure there is provision of sufficient time and access to a clean, private space to do blood testing
- The school administrator must coordinate with the family who must make arrangements for the safe disposal of lancets and needles, including sharps containers and communicate these arrangements to staff
- The school administrator must put in place the necessary steps to ensure the disinfecting of the blood glucose monitoring area with appropriate cleansers.

Hypoglycemia

Parent(s)/Guardian(s) and Student Responsibilities:

- Parent(s)/guardian(s) must describe to school personnel the specific low blood glucose signs and characteristics of the student.
- Parent(s)/guardian(s) must review the emergency procedures for treating moderate to severe low blood glucose annually and when the medical needs of the student change
- Parent(s)/guardian(s) must provide at school snacks as well as a constant supply of fast-acting sources of sugar to prevent and treat low blood glucose. Sufficient supplies must be provided to enable the school to keep them in several locations in the school to facilitate prompt access.
- As required, parent(s)/guardian(s) will provide the school with supplies of fast acting sources of sugar.
    - *Oral Glucose (tablets, gel) is not considered a medication.

School Responsibilities:

- School personnel must endeavour to ensure that students eat all snacks and meals, fully and on time. This is especially important in elementary schools for younger children and those with special needs.
- The school must ensure the student is permitted to take fast acting sources of sugar to prevent or treat low blood glucose anywhere on school property, on buses, or during school-sanctioned activities.
- The school administrator must ensure the safe supervision of all students. Until the student is fully recovered, he/she should not be left unsupervised. Once the recovery is

complete, the student can assume regular class work. If, however, it is decided that the student should be sent home, it is imperative that he/she is accompanied by a responsible person.

- School personnel should contact the parent(s)/guardian(s) after treatment of moderate or severe low blood glucose as outlined in the Individual Management Plan.
- Designated School personnel must contact the parent(s)/guardian(s) immediately if the student is unable to eat or vomits at school.
- The school must provide safe and accessible storage of the student's food and diabetes supplies.
- School personnel are **NOT** responsible for giving insulin injections.
- School personnel must ensure that the student has time and a clean, private space to self-inject insulin if necessary.
- School personnel must make arrangements for the safe storage of insulin and syringes/pens if necessary
- School personnel must coordinate with the family for the safe disposal of lancets, syringes, test strips, etc. This may mean that a container is provided by the family, or that the student transports sharps home for safe disposal
- Consider individualized approaches for secondary students to manage their diabetes.

GENERAL INFORMATION ABOUT TYPE 1 DIABETES

Introduction

Diabetes mellitus is a metabolic disorder characterized by the presence of elevated levels of sugar in the blood due to defective insulin secretion, insulin action, or both. Type 1 diabetes is primarily a disease of the pancreas which results in a lack of insulin action. Without insulin, carbohydrates (sugars) in the food we eat cannot be converted into the energy (called blood, glucose or "blood sugar") required to sustain life. Instead, unused glucose accumulates in the blood and spills out into the urine. Persons with Type 1 diabetes require the administration of insulin on a regular and ongoing basis.

Philosophy of Diabetes Management

The ultimate goal of diabetes management within the school setting is to have the child be independent with their care. This independence of diet, includes the specific management activity, medication (insulin) and blood sugar testing, as required. Independence of care also includes the development of self-advocacy skills and a circle of support among persons who understand the disease and can provide assistance as needed.

Children are diagnosed with diabetes at various stages of their lives. Some will be very young, and others older and more mature, some will have special needs. The goal for all of these children is to become as independent as possible, as soon as possible in managing their diabetes. The school role is to provide support as the child moves from dependence to independence and to create a supportive environment in which this transition can occur. Nevertheless, the ultimate responsibility for diabetes management rests with the family and the child.

It is important that the school develop awareness activities and emergency procedures for teachers who have a child with diabetes in their class.

"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 their understanding of the unique needs of

the student with diabetes is important."- Jim Whitson, Chair - Ontario Division, Education Task Force, Canadian Diabetes Association.

School-aged children 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 can support a student with diabetes by learning about the disease and by having frequent, open communication with parents and the child. This will help to reduce apprehension and anxiety in the child and parent, provide a positive attitude toward the child's participation in school activities and contribute to the student's well-being.

When the blood glucose is in proper balance, the child or adolescent will behave and achieve as others. In terms of academic performance, physical activity, behaviour and attendance at school, the teacher's expectations of students should be the same as if he or she did not have diabetes.

Emergency versus Non-Emergency Situations

It is important to distinguish between an emergency and non-emergency situation.

Non-Emergency Situations:

In non-emergency situations, including routine care, students with diabetes or their parents will administer the insulin injections.

Emergency Situations (Life-Threatening):

In emergency, life-threatening situations, where a student suffering from low blood sugar is unable to self-administer the appropriate treatment because they are unresponsive or unconscious, the response of school staff shall be a 911 call for Emergency Medical Services.

Glycogen injections (Glucagon) in these situations will not be administered by school staff.

Emergency Medical Services personnel require the following, if available:
Student's name
Date of birth
Health Card number
Emergency contact information
Medical history - available on the OSOR card and the Individual Management Plan
Observations about what the student was doing prior to the event
Medications and any treatment prior to EMS arrival

Definitions: Three Main Types of Diabetes

Type I Diabetes usually affects children and adolescents and is the focus of this document. In Type I Diabetes, the pancreas is unable to produce insulin and injections of insulin are essential.

Type2 Diabetes comprises 90% of diabetes in Canada. It usually develops in adulthood, although recently increasing numbers of children in high-risk populations are being diagnosed. In Type 2 diabetes the pancreas may produce some insulin, but the body is unable to use the insulin that is produced effectively. Type2 diabetes may be controlled with diet and exercise or with oral medication. Eventually, people with Type 2 Diabetes may need insulin.

Gestational Diabetes affects 4% of pregnant women and usually goes away after the baby is born.

Type1 Diabetes -The Balancing Act

a) Overview

The treatment of diabetes is a balancing act. Food, on the one side, increases the amount of glucose in the blood. Exercise and insulin, on the other side, lower the blood glucose level by allowing the glucose to be used for energy. The goal of the balancing act is to keep the blood glucose levels in a healthy range. The student's doctor determines the target range for each individual child. The parents should inform the school staff of the child's optimal levels if the child is not independent with diabetes management. Most students will be aware of their blood sugar targets.

b) Why is it so important to achieve optimal blood sugar control?

Recent research (Diabetes Control and Complications Trial (DCCT)-1993 and the United Kingdom Prospective Diabetes Study (UKPDS) -1995) has provided evidence that good blood sugar control can reduce the risk of complications, such as kidney failure, blindness, limb amputation, heart disease, stroke and sexual dysfunction. These conditions take their toll in human suffering and cost Canada's health care system over 9 billion dollars annually for direct and indirect health care services.

Areas of Concern

1. Adjustment Period After Diagnosis

When a child has recently been diagnosed with diabetes, the parents usually feel shocked and scared. They also may feel numb, sad, guilty and angry. The fact that Diabetes is a serious disease with significant complications and that their child will have to live with the complexities of its management for the rest of their lives (or until a cure is found) is quite overwhelming. The first year after diagnosis maybe difficult while the family and student works with the Diabetes Health Care Team to adjust to all they have to learn and to cope with life with diabetes.

School personnel can help by:

- Learning as much as possible about diabetes athttp://www.diabetes.ca
- Communicating openly with parents
- Providing special considerations as suggested in the Canadian Diabetes Association publications, "Kids with Diabetes in School" and "Kids with Diabetes in Your Care"
- Helping other students in the class understand diabetes. This might be done by the parent, the Canadian Diabetes Association, or the student himself or herself.

2. Independence Vs. Protection

Parents and school personnel need to protect the child while encouraging him or her to develop independent diabetes management skills. Children must learn to manage their own diabetes. They can do it. Even very young children can share the work of managing diabetes. How much a student can do depends on his or her age, how long he or she has had diabetes and any disabilities or special needs.

3. Hypoglycemia(Low Blood Glucose) An Emergency

Hypoglycemia is an emergency situation caused by LOW blood sugar. The situation can develop within minutes of the child appearing healthy and normal.

Mild to moderate hypoglycemia is common in the school setting. School personnel need to know the causes, symptoms and treatment of 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. The Signs and Symptoms of Hypoglycemia chart in the appendix is a guide to be consulted.

Severe Hypoglycemia will occur in 3-8/100 students with diabetes per year and occur most commonly at night. Severe hypoglycemia is rare in the school setting. In severe hypoglycemia, the student may be unconscious or conscious. There may be seizures. If the student is unconscious, having a seizure or unable to swallow, food or drink must not be given.

4. Hyperglycemia (High Blood Glucose) A Non-Emergency

Hyperglycemia is not an emergency condition requiring immediate treatment. However, prevention of hyperglycemia is key to delaying or avoiding serious complications. The parents and the child's physician need to be aware of persistent hyperglycemia.

Children with diabetes sometimes experience high blood glucose. The earliest and most obvious symptoms of high blood glucose are increased thirst and urination. If noticed, these should be communicated to the parents to assist them in the long-term treatment. They are not emergencies that require immediate treatment.

High blood glucose often develops as a result of one or more of the following:

- too much food:
- less than the usual amount of activity;
- not enough insulin; and/or
- illness.

Many times, however, there does not seem to be an obvious explanation.

5. Blood Glucose Self-Monitoring: Testing Blood Sugar

a) Why do it?
Self-Monitoring of Blood Glucose is mandatory for achieving the target blood sugar levels. Blood sugar levels will change with eating, physical activity, stress, or illness.

Sometimes the blood sugar fluctuates for no apparent reason.

Knowing blood sugar levels will:

Help the student understand the balance of food, insulin and exercise
Help the doctor adjust insulin and food
Help avoid the consequences of hypoglycemia and hyperglycemia.
Monitoring will give early warning without waiting for the onset of symptoms.

b) Equipment
A small meter, which runs on batteries (There are various meters on the market)
Test strips
Lancet device
Lancets
Logbook

c) Procedure for Blood Glucose Monitoring (To be done by the student or guardian)
The student washes hands with warm water and soap
Inserts a lancet in the lancet device
Places a test strip in the meter
Pokes the side of the fingertip and obtains a drop of blood
Places the blood on the area indicated on the test strip
Waits for 5 to 45 seconds, depending upon the meter
Notes the reading and records in logbook or automatically recorded in meter

Timing varies with the individual and is done according to the advice of the child's Physician and parents. Usually the blood glucose is tested before meals, before bed and before/during/after exercise.

d) Ketone Monitoring
This monitoring is not usually done daily as with blood glucose testing. However, some students with diabetes monitor their ketone levels according to guidelines prescribed by their healthcare professional. Teachers and other school personnel have no responsibilities in the actual procedure.

However, it is important for the teacher:
i) To understand and accommodate the student who needs to monitor ketones.
ii) To call the parents immediately if any student with diabetes becomes ill, especially with vomiting.

What Teachers Should Know About Ketones:
- Hyperglycemia (see High Blood Glucose) may result in ketones in the blood and urine.
- In hyperglycemia, glucose stays in the blood and the body cannot use it for fuel. The body then breaks down fat for fuel. This process produces ketones as a by-product. If ketone levels continue to rise the blood becomes acidic.
- Rising ketone levels can spiral into the potentially dangerous condition known as Diabetic Ketoacidosis (DKA).
- Left untreated DKA can cause death.
- DKA usually develops over several days, but frequent vomiting can cause the ketones to build up in just a few hours.
- The flu and stomach viruses are common contributors to DKA.
- Students on insulin pumps develop DKA more quickly than if they were using injected insulin.
- High blood glucose plus ketones may mean that the student needs more insulin than their usual regimen calls for.
- Each student should have individualized guidelines explaining how to handle sick days and what to do if ketones are on the rise.

6. Insulin Injections

   Recent advances in medical devices allow people with diabetes to choose the way they administer their insulin:
   - Conventional syringe and vial method
   - Insulin pen
   - Insulin pump

   Most insulin injections are administered outside school hours before breakfast and supper and at bedtime. However, the insulin regimen varies with the individual and some students do require an insulin injection before lunch.

7. Kids with Diabetes in the Classroom – Canadian Diabetes Association

   a) Student Responsibility for Diabetes Management
   If a student is not taking responsibility for his or her diabetes care it may be due to other factors, such as language, cognitive ability, maturity level, behavioural issues and psychosocial barriers. This calls for communication between parents, teachers and possibly other professionals.

   b) In the Classroom
   The behaviour of students with hyperglycemia may be taken for misbehaviour (i.e. frequent requests to go to the bathroom or requests for frequent drinks).

   c) Interference with School Activities
   When blood sugar levels are outside the target range (i.e., hypoglycemia or hyperglycemia) the student's learning, behaviour and participation may be affected. However, having diabetes is not an excuse for inappropriate behaviour.

   d) Sports and Co-Instructional Activities
   Children with diabetes should be encouraged to participate in as many activities as they choose. They should not be excluded from school field trips. School sports and other co-instructional activities can promote self-esteem and a sense of well-being.

   e) For children who wish to participate in vigorous physical activity, good planning is essential so that the blood glucose balance is maintained. The major risk of unplanned vigorous activity is low blood glucose. This can be prevented by eating additional food. It is critical that the child's teachers, especially Physical Education teachers and coaches, are familiar with the symptoms, treatment and prevention of hypoglycemia.

   f) Parents should be notified of special days that involve extra activity so that they can ensure that the child has extra food to compensate.

   g) Sports or other activities that take place during meal time require extra planning. Timing of meals and snacks may be varied and the insulin dose adjusted so that children with diabetes can safely participate. It is advisable that both the parent and the child with diabetes carry some form of fast-acting sugar such as glucose tablets or juice boxes on outings or sports events.

Local Heath Resource Agencies
Community Care Access Centre's
Canadian Diabetes Association
Huron-Perth Diabetes Education Centre's (At your local hospital)

INDIVIDUAL DIABETES MANAGEMENT PLAN

Student Name:	School:
Date of Birth:	Home Phone Number:
Doctor(s):	Medical Condition(s):
Parent/Guardian:	Medication(s) and Doses:
Address:	Teacher(s):

The following is a medical management plan that will identify how to act appropriately and safely for this student.

PREVENTION/AVOIDANCE STRATEGIES:

POSSIBLE SYMPTOMS:

EMERGENCY PROCEDURES:

LOCATION(S) OF MEDICATION:

DISPOSAL OF MATERIALS/MEDICATIONS:

If the situation **at any time** is deemed an emergency by any member of the school team, 911 will be called. In the case of seizure activity, a time period should be established (e.g., after 5 minutes) then call 911.

WHO TO NOTIFY:

Name:	Phone Number:
1.	
2.	
3.	
4.	

AUTHORIZATION:

We hereby authorize the above protocol to be followed by the school staff and Transportation Department in the event that this student has the above mentioned medical condition at school. Information cards, including photographs, will be distributed. We also release school personnel and the Avon Maitland District School Board from liability arising from the administration of medication(s) and/or treatments listed in this plan.

This plan is effective: _____

SIGNATURES:

Parent(s)/Guardian(s)	Date
Principal	Date
Doctor(s)	Date:
Other(s)	Date:

A copy of this Individual Diabetes Management Plan should be with the child at all times.

Personal information on this form is collected under the authority of the Education Act and will be used for educational, health and welfare purposes affecting the student. This form will be retained in the student's Ontario Student Record. Questions about this collection should be directed to the school Principal or the Superintendent of Education (Learning Services). Avon Maitland District School Board, 62 Chalk St. N, Seaforth, ON NOK IWO Phone: 519-527-0111.