DISMISSAL NOTICE

63-06-07

Pediculosis Form
(For Middle or High School Students)

Dear _____,

Your child, _____ who is a student at _____ School **has been assessed as having head lice and/or nits (pediculosis)** and is being temporarily dismissed from school. Treatment shampoo can be purchased at any drug store without a prescription. If you have Medicaid or Health Insurance for medications, you may wish to get a prescription for treatment from your child's doctor. *(Instructions are furnished with any of the treatments.)*

Your child may not return to school until they have been cleared by the onsite School Health Technician.

School Board policy and recommended treatment procedures for head lice and/or nits are listed below.

Principal: _____ Date: _____

School Board Policy 5.5033: Head Lice Infestation.

A student who has been sent home with head lice and/or nits should return to school, free of head lice and/or nits, within 3 (three) calendar days; absences from school during the three calendar days will be excused. For each occurrence of head lice and/or nits, absences beyond 3 (three) calendar days will be **unexcused.**

RECOMMENDED TREATMENT FOR HEAD LICE

1. **Follow instructions carefully on treatment shampoo label. Chemical based and natural shampoo products are available.**
2. **Use thumb, forefinger, and/or metal comb to pick or pull nits (eggs) from each hair while using bright light source.**
3. **Wash any articles coming into contact with the head (combs, brushes, hats, coats, towels, bed linen, etc.) with hot soapy water.**
4. **Vacuum thoroughly carpeted areas and upholstered furniture.**

HEAD LICE TRACKING LOG

STUDENT NAME:	GRADE/TEACHER:	SENT HOME DATE:	CLEARANCE DATE:

School Health Technician: _____

HEAD LICE CLEARANCE

_____ has been screened for head lice re-admittance.

No head lice or nits were found, and the student may return to class. Please feel free to notify the School Health Clinic if you have questions or concerns.

_____ _____

Signature Date

HEAD LICE CLEARANCE

_____ has been screened for head lice re-admittance.

No head lice or nits were found, and the student may return to class. Please feel free to notify the School Health Clinic if you have questions or concerns.

_____ _____

Signature Date

HEAD LICE CLEARANCE

_____ has been screened for head lice re-admittance.

No head lice or nits were found, and the student may return to class. Please feel free to notify the School Health Clinic if you have questions or concerns.

_____ _____

Signature Date

Procedure for Teen Pregnancy

Purpose: This procedure establishes guidelines for the School Health Nurses and school personnel to appropriately counsel and/or refer services for pregnant teens, teens suspecting pregnancy, or teenage parents.

Definitions: **Pregnant teen** - a teen with a positive pregnancy test or pregnancy diagnosis by a physician or licensed medical personnel.

Suspected teen pregnancy - a teen reporting sexual activity with late or missed period or experiencing signs/symptoms of pregnancy.

Teen parent – a school age student who is a mother or father who meets the compulsory school attendance age range.

WIC - WIC is the special supplemental nutrition program for women, infants and children. WIC provides supplemental, nutritious foods for females that are pregnant, breastfeeding and postpartum women, infants, and/or children up to the age of five (5) who are at nutritional risk.

Healthy Start - Healthy Start provides risk screening for all pregnant women and newborns in order to identify individuals at risk for poor health outcomes and to reduce those risks by providing specialized services.

Pregnancy Resource Center - The Pregnancy Resource Center is a non-profit, non-sectarian, all volunteer organization that offers free pregnancy testing, confidential counseling, parenting classes, nutrition classes, maternity clothes, etc.

Procedure:

I. Identify students with suspected or confirmed pregnancy. Referrals may be made by:
   - A. The School Health Technician will refer students meeting pregnancy criteria to the School Health Nurse.
   - B. Consult with guidance department regarding possible referrals.
   - C. Other school personnel
   - D. Student - self referral or other
   - E. Parent/Guardian
   - F. Department of Health employee

II. The School Health Nurse will interview and assess student to determine needs.

   A. For suspected teen pregnancy
      1. Has teen been sexually active?
      2. Determine last menstrual period (LMP).
      3. Assess for pregnancy signs or symptoms (missed period, breast tenderness, nausea/vomiting, weight gain, feeling tired).
      4. If pregnancy has not been confirmed by medical personnel, assist in making appointment for evaluation.

5. Encourage communication with parent/guardian regarding pregnancy concerns.

B. For pregnant teen:
   1. If pregnancy has not been confirmed by medical personnel, assist in making appointment for evaluation.
   2. Encourage communication with parent/guardian regarding pregnancy concerns.
   3. Provide information on healthy behaviors including balanced diet, exercise, and rest.
   4. Discuss pregnancy warning signs/symptoms.
   5. Discourage smoking, alcohol and drug use including over-the-counter (OTC) medications.

C. For teen parents:
   1. Assess support system outside of the school environment.
   2. Assess what resources are already being utilized.

III. Documentation

A. Document encounter on School Health Nurse Progress Notes.
B. With student consent, health alert should be distributed to appropriate school staff. *Refer to Pregnancy Health Alert*.

STUDENT HEALTH ALERT

PREGNANCY

Student Name: _____ Date: _____

Teacher/Advisor: _____ Grade: _____

Symptoms	Actions
If student complains of or you observe any of the following: • Nausea/Vomiting • Muscle cramps • Edema (swelling, mostly in feet/legs) • Headache • Toothache • Difficulty breathing (Dyspnea) • Blurred vision • Spotting or leaking of fluid	Bring student to the School Health Clinic as soon as possible.
Other common problems: Itching, heartburn, fatigue, constipation, hemorrhoids, varicose veins, and back pain.	If these become troublesome, refer student to the School Health Clinic.
If student complains of severe cramping or pain, bleeding, difficulty breathing, has seizure or becomes unconscious	**Immediately notify 911, principal or designee, parent/guardian and School Health Nurse.**

Medications	Possible Side Effects
_____	_____
_____	_____

Student should not take non-prescribed medication, smoke, drink alcohol or use drugs during pregnancy as they could affect the developing fetus.

By my signature on this form, I acknowledge receipt of the Notice of Privacy Practices Act, and authorize designated Santa Rosa County School District personnel, Santa Rosa County Health Department School Health personnel, and any other contracted health care agencies to provide emergency care for myself and/or child and to exchange medical information as necessary to support the continuity of care for myself and/or my child.

Signature: _____ Date: _____

DO <u>NOT</u> FILE IN STUDENT CUMMULATIVE SCHOOL HEALTH RECORD

Copies to: Guidance _____ Clinic _____ Administration _____ Teachers: _____ _____

_____ _____

_____ _____

Other: _____

Procedure for Recognizing and Responding to Asthmatic Events

Purpose: This procedure establishes guidelines for School Health Nurses, School Health Clinic Staff, and school personnel to meet the health needs of a student or staff member experiencing asthma related events in the school environment.

Definitions: **Asthma** - Asthma is a chronic inflammatory disorder of the airways which causes recurrent episodes of wheezing, breathlessness, chest tightness, and cough, particularly at night and early morning. It is characterized by excessive sensitivity of the lungs to various stimuli and with physical exertion causing airflow obstruction.

Florida Statute 1002.20(3)(h) - allows students with proper authorization to carry on their person prescribed inhalant

Nebulizer - delivers medications, in mist form, directly into the lungs via air compressor (i.e., air pump)

Peak Flow Meter - a tool for objectively measuring the severity of airflow obstruction

Peak Flow Reading - is the fastest speed at which air is forced from the lungs after taking in a deep breath; this measurement is useful in detecting changes in the airways that signal a worsening of symptoms and/or improvement in breathing function and monitor response to treatment

Triggers - are stimuli that cause asthma episodes such as: respiratory infections, pollen, mold, animal dander, feathers, dust, food, vigorous exercise, sudden temperature changes, air pollution, fumes, strong odors, cigarette smoke, excitement, and/or stress

Procedure:

I. Responsibilities in Asthma Management
   - A. School Health Technician/paraprofessional
     1. Complete appropriate level of asthma education.
     2. Perform delegated asthma management/refer to Emergency Health Care Plan.
     3. Communicate with parent/guardian about acute asthma episodes.
     4. Alert School Health Nurse of any asthma management concerns.
     5. Assist with student use of inhaler, nebulizer treatments with masks, mouthpieces, or nasal cannula and cleaning after each use.
   - B. School staff
     1. Administration
        a. Designate two staff members to receive training and provide child specific care as needed.
     2. Physical education faculty
        a. Collaborate with parent/guardian to identify appropriate activity level.
        b. Encourage exercise and participation in sports for students with asthma but, recognize and respect their limits/refer to Emergency Health Care Plan as appropriate.
     3. All school staff

a. Alert School Health Nurse of any asthma management or school attendance concerns.
b. Understand that special health arrangements may be necessary even during standardized testing period.
c. Follow student's *Emergency Health Care Plan.*

C. School Health Registered Nurse (RN)
1. Provide appropriate level of individualized asthma education as appropriate and/or upon request.
2. Develop and maintain student Emergency Health Care Plan as needed.
3. Delegate and document child specific asthma management to trained and competent designees.
4. Obtain peak flow readings and implement action plan if indicated.
5. Communicate with parent/guardian about any difficulties in controlling asthma at school.
6. Act as a liaison between student's health care provider, parent/guardian, and school staff.
7. Provide student health education about asthma to promote responsible self-care.

D. American Lung Association
1. Facilitate the acquisition of peak flow meters and disposable mouthpieces for each school.
2. Facilitate "Counting on You" and "Open Airways" programs for Pre-K and elementary students with asthma.

Asthma Action Plan:

Peak Flow Best: _____ Usual Peak Flow: _____ (Range)

NORMAL	CAUTION	EMERGENCY
Green Zone Greater than _____ 1. Document reading on Student Medication Record 2. Return to class	Yellow Zone Less than _____ 1. Document reading on Student Medication Record 2. Administer one (1) dose of authorized medication: _____ 3. Repeat peak flow reading in 20 minutes. **If green zone:** Return to class No exercise today Notify parent/guardian **If yellow zone:** Call parent/guardian to take student home **If red zone:** Call 911 Contact parent/guardian and notify physician immediately	Red Zone Less than _____ 1. Document reading on Student Medication Record 2. Administer one (1) dose of authorized medication: _____ 3. Call 911 Contact parent/guardian and notify physician immediately 4. Continue to monitor peak flow readings every five 5 minutes

Procedure for Responding to Seizures in the School Setting

Purpose: This procedure establishes guidelines for School Health Nurses, School Health Clinic Staff, and school personnel to meet the health needs of a student with seizures in the school environment.

Definitions: **Epilepsy** - a brain disorder involving repeated seizures of any type; some types of epilepsy run in families

Seizure - a sudden change in behavior due to abnormal electrical activity in the brain; some of the most common causes include epilepsy, fever, infection, brain injury, or low blood sugar.

Common types of seizures include:
Petit Mal/Absence - characterized by brief staring episodes
Grand Mal/Tonic-Clonic/Generalized - convulsions; body stiffening and loss of consciousness followed by shaking of the arms and legs (muscle rigidity and muscle contractions)
Partial - characterized by twitching or jerking in one part/side of the body, repetitive movements, turning of the eyes; partial seizures may spread to the whole brain and become Tonic-Clonic

Diastat - Diazepam rectal gel is an emergency intervention drug used to control prolonged seizures and clusters of seizure activity.

Vagal Nerve Stimulation - This therapy is designed to help prevent seizures by sending regular small pulses of electrical energy to the brain via the vagus nerve. This therapy consists of a device implanted in the chest wall with electrodes attached to the vagus nerve in the neck. The device is programmed to emit impulses regularly. However, additional impulses can also be generated by passing a magnet over the implant site in the chest. The student may utilize the magnet if he/she feels seizure activity coming on. The magnet may also be used by trained staff to stop seizure activity if the student is unable.

Procedure:

I. Seizure Management

A. Develop a student Emergency Health Care Plan as needed for students identified as having a seizure disorder to be completed by the School Health Registered Nurse (RN).
   1. Distribute plan/notify appropriate personnel of a student's health care needs.

B. Assure that at least two (2) staff members are trained to provide first aid for seizures.
   1. For convulsive seizures:
      a. Keep calm and reassure other students/staff.
      b. Prevent injury by moving near-by objects; don't hold or attempt to restrain movements; don't place any objects between the teeth; place student on his side to keep airway clear.

c. Time all seizure activity.
d. Call 911 if: convulsion lasts longer than five (5) minutes or as directed by physician; student has repeated seizures; student is pregnant, diabetic, injured, or has no known seizure history; student has trouble breathing during/after the seizure; or if Diastat is used.
e. Notify parent/guardian and school administration or designee.

2. For non-convulsive seizures:
   a. Reassure/comfort the student as needed.
   b. Help to reorient the student.
   c. Note time and behaviors exhibited and then notify parent/guardian.

C. Document seizure on Daily Activity Log and Seizure Activity Log, if appropriate.

II. Administration of Diazepam Rectal Gel (Diastat) in the school setting.

The use of this drug should be limited to life-threatening convulsive seizure activity: convulsive seizures lasting greater than five (5) minutes or as directed by a physician or status epilepticus, which consists of repeated convulsive seizures without a return to consciousness between seizures.

A. Develop a student Emergency Health Care Plan for students prescribed Diastat for school use to be completed by the School Health Registered Nurse (RN).
   1. Distribute Emergency Health Care Plan to appropriate school personnel.
B. Assure that at least two (2) staff members are trained to administer Diastat.
C. Call 911 when Diastat is administered, notify school administration or designee.
D. Notify parent/guardian of seizure activity and of administration of Diastat.
E. Document seizure activity and drug administration on the student record.
F. Continue to monitor student until EMS arrives.
G. Give the Diastat container with the time of administration to EMS.

III. Use of Vagal Nerve Stimulation

A. Develop a student Emergency Health Care Plan for students with an implanted vagal nerve stimulator, VNS (completed by the RN).
   1. Distribute Emergency Health Care Plan to appropriate school personnel.
B. Assure that at least two (2) staff members are trained to apply the magnet over the VNS.
C. Maintain the magnet in a safe location, away from other magnetic sources. (i.e. televisions, computers, microwave ovens, etc.).
   1. Ensure that trained staff is aware of magnet location.
C. Notify parent/guardian of use of the magnet during the school day.
D. Document magnet use and any seizure activity on the student Cumulative School Health Record.
E. Call 911 if:
   1. Convulsive seizure lasts longer than five (5) minutes.
   2. Student has repeated seizures.
   3. Student has trouble breathing during/after a seizure.

SEIZURE FACT SHEET

Seizures can be **Generalized** (affecting the whole brain) or **Partial** (affecting part of the brain)

Generalized
1. *Tonic-Clonic (grand mal)* - convulsions, shaking, jerking and stiffness; loses consciousness
2. *Absence (petit mal)* - has a blank stare, appears dazed or in a daydream; may blink or chew repeatedly
3. *Atonic (drop attack)* - falls or collapses suddenly, but may stand and walk again within a minute
4. *Myoclonic* – has sudden powerful movements of the arms, hands or torso

Partial
1. *Simple partial* - muscle twitching or jerking in one part of the body such as an arm, hand, or leg; you may see, hear, or smell things that aren't there
2. *Complex partial* - may be confused, dazed, or not able to talk. Walks, but may appear clumsy, may pick at clothing or objects

Basic seizure first aid:
Stay calm and track time
Keep child safe
Do not restrain
Do not put anything in the mouth
Stay with child until fully conscious
Record seizure in log/on record
For Tonic-Clonic (grand mal) seizure:
Protect head
Keep airway open/watch breathing
Turn child on side

A seizure is generally considered an emergency when:
A convulsive (Tonic-Clonic) seizure lasts longer than 5 minutes
Student has repeated seizures without regaining consciousness
Student has a first time seizure
Student is injured or has diabetes
Student has breathing difficulties
Student has a seizure in water

DIASTAT and DIASTAT ACUDIAL SKILLS CHECKLIST

Trainee's Name: _____ Date: _____
(Please Print)

Trainee's Signature: _____ Trainee's Initials: _____

EXPLANATION/RETURN DEMONSTRATION	TRAINEE'S INITIALS
1. Observe student for signs/symptoms of seizure activity (Note time of onset)	
2. Call or delegate someone to call 911 and parent/guardian; notify school site administration staff.	
3. Check medication expiration date, physician's order, and student's *Emergency Health Care Plan*	
4. Place student on left side	
5. Provide privacy	
6. Prepare Diastat for administration (If using Diastat AcuDial confirm dosage is visible and correct in display window and the green {ready} band is visible) -Remove cap -Lubricate tip with gel if not self-lubricating -Separate buttock -Insert tip into rectum -Inject Diastat slowly – count 1-2-3 -Hold applicator still – slowly count 1-2-3 -Remove applicator slowly -Hold buttocks together – slowly count 1-2-3	
7. Stay with student until help arrives -Monitor respiratory status -Monitor seizure activity -Clear immediate area to prevent harm	
8. Report the following to EMS -Appearance of seizure activity -Time seizure began and ended	
9. Give the Diastat container with the time of administration to EMS	
10. Document on appropriate form: time of onset, symptoms observed, time medication administered, response to medication, time EMS arrived/transport	

Instructor's Name: _____
(Please Print)

Instructor's Signature: _____

Rev 05/15/2013

Procedure and Guidelines for Managing Diabetes in the School Setting

Purpose: The Santa Rosa County School District, the Santa Rosa County Health Department, Pediatric Services of America (PSA), the American Diabetes Association, and Nemours Pediatric Endocrinology Clinic, in conjunction with the Sacred Heart Hospital Diabetes Education Program, have approved this procedure that establishes guidelines for competently meeting the medical needs of a student with diabetes in the school environment.

Definitions: *Refer to Glossary*

The following procedure pertains to guidelines for managing diabetes via an insulin pen or syringe. For students with an insulin pump, Refer to Guidelines for Managing Diabetes: Insulin Pump.

Procedure:

I. School personnel and School Health personnel responsibilities:

A. Staff education – School personnel must have an understanding of diabetes and its management to facilitate the appropriate care of students with diabetes. It is the responsibility of the School District and the School Health Nurse to implement annual training for each school that has a student with diabetes. Training should include a brief overview for all school based staff, in-depth training for all school based staff that has direct contact with the student; and individualized training to meet specific student needs.

B. Obtain and follow Authorization for Diabetes Management Form and physician orders to include the physician's and parent/guardian signatures.

1. Only a School Health Registered Nurse (RN) or School Licensed Practical Nurse (LPN) may obtain verbal physician orders to facilitate management of the student with diabetes or to document a need for change in the student's plan of care.
2. Original signature is preferred for all physicians' orders, but a faxed order may be accepted.

C. A student specific *Emergency Health Care Plan (EHCP)* should be developed by a School Health Registered Nurse (RN).

1. The School Health Registered Nurse (RN) should delegate a trained, competent school-based person(s) to follow the Emergency Health Care Plan and the Authorization for Diabetes Management Form and/or physician orders.

D. Provide a safe, private, and accessible space for the finger-stick procedure and for the insulin administration.

1. The School Health Clinic is the preferred site for these procedures.
2. Alternative sites for diabetes management may be identified on the Emergency Health Care Plan with consideration of student safety, proximity of the classroom to the clinic, availability of appropriately trained staff, and the documented level of student competency responsibility.

E. Provide a trained, competent or licensed person to perform, assist with, or observe the blood glucose monitoring procedure and the insulin administration based on the student's Self-Care Assessment. Refer to Authorization for Diabetes Management Form.
F. Unless physician or nursing documentation allows for the student to perform calculations and insulin administration independently, provide verification of insulin calculation and dosage with the School Health Nurse, the designated school personnel, or the parent/guardian prior to insulin administration.
G. Designated school personnel should be trained and knowledgeable of:
    1. Treatment of hypoglycemic emergencies
    2. Administration of emergency glucose source
H. Notify appropriate personnel of student health care needs. Notify parent/guardian as indicated on the action plan of the Authorization for Diabetes Management Form and/or the Emergency Health Care Plan.
I. Document glucose levels, presence of ketones, and amount of insulin administered on the Diabetic Monitoring Log; record student visit on the Daily Activity Log.
J. Provide carbohydrate counts of foods as documented through the School District's Food Service Department.
K. Provide sharps containers for School Health Clinics.
L. Call for emergency help as needed.

Medication Note – For the safety of all students, medications (pills, insulin, glucagon, etc.) shall be received in the original container, counted, and then stored under lock/key. The student specific Emergency Health Care Plan will notate if a student will carry insulin/supplies or if the insulin/supplies will be kept in an alternate site other than the School Health Clinic.

II. Health care provider responsibilities
    A. Provide consultation in the development of and maintenance of the student health care needs and management.
    B. Complete Authorization for Diabetes Management Form upon diagnosis, on a yearly basis, and as needed for changes in diabetes management.
        1. Documentation includes the initial Self-Care Assessment of the student's knowledge, skill level, and ability to self-manage care; whether the student needs assistance with care, or if the student is dependent for care.
    C. If applicable, complete additional insulin orders/Flexible Insulin Therapy (FIT) upon diagnosis, on a yearly basis, or as needed for changes in diabetes management.
    D. Provide phone order to the School Health Registered Nurse (RN) or School Licensed Practical Nurse (LPN) in order to facilitate management of student needs with diabetes and/or to initiate a change in the student's plan of care/physician orders.
    E. Provide consultation in training and education of designated school-based providers.

III. Parent/guardian responsibilities
    A. Provide school with completed Authorization for Diabetes Management Form, to include physician signature and date. The form must also include the parent/guardian signature and date for parent/guardian permission.

1. The form will be provided upon diagnosis, updated at the beginning of each school year, and as needed to initiate change.

B. When applicable, provide the school with additional insulin orders/Flexible Insulin Therapy (FIT) upon diagnosis, at the beginning of each school year, and as needed to initiate change.
C. Notify the school of changes in diabetes orders that may affect medical management during the school day.
D. Participate in the development of the student's Emergency Health Care Plan.
E. Meet with appropriate personnel to establish and maintain services.
F. Authorize physician to release medical information to appropriate school personnel as per Authorization for Diabetes Management Form.
G. Provide equipment and supplies needed for procedures, treatment and management of diabetic needs, to include hypoglycemic supplies, snacks, and medications.
H. Maintain the calibration of the blood glucose monitor used at school.
I. Provide the school with names and telephone numbers of people to be notified in case of uncertainty in management or in the event of an emergency.
J. Retain responsibility for care that is provided by the personal designee of the parent/guardian, i.e. friend or relative.
K. Accept financial responsibility for 911 calls and transportation to the hospital if needed.

IV. Student responsibilities

A. The student's health care provider will determine the level of responsibility of diabetic care as indicated on the Authorization for Diabetes Management Form under the student's Self-Care Assessment.
B. The parent/guardian, School Health Nurse, or school administration or designee may request re-evaluation of student's competency whenever indicated.
C. Only the physician or the School Health Registered Nurse (RN) may update the student's Self-Care Assessment.
D. Levels of care/responsibility
    1. Self-Care – demonstrates competency, knowledge, skill, and ability to perform blood glucose monitoring and insulin administration independently. The student should be able to:
        a. Describe signs and symptoms of hypoglycemia.
        b. Verbalize plan for blood glucose level consistently.
        c. Utilize plan for blood glucose level.
        d. Perform blood glucose monitoring independently, including calibration of monitor to test strip when applicable.
        e. Check for ketones with blood glucose level of 300 or higher.
        f. Determine insulin dosage and administer insulin independently.
        g. Dispose of sharps and store equipment safely and correctly.
        h. Document test results and insulin dosage accurately, when applicable.
    2. Assisted Care – exhibits competency at one or more tasks, but is not yet functioning independently. Student will need assistance from a trained, competent person; parent/guardian; or School Health Nurse. The student should be able to:
        a. Cooperate in all diabetes tasks at school.

b. Describe some signs and symptoms of hypoglycemia.
c. Follow plan for blood glucose levels, with assistance as needed.
d. Perform blood glucose monitoring, with assistance as needed.
e. Check for ketones with blood glucose level of 300 or higher.
f. Calculate, or attempt to learn calculations for insulin dosage; verify calculation of insulin dosage with parent/guardian or school-based person(s) unless physician or nursing documentation allows for student's independence.
g. Self-administer insulin after verification of dosage on pen or syringe with designated personnel.
h. Dispose of sharps and store equipment safely and correctly.
i. Document test results and insulin dosage accurately, when applicable.

3. Dependent Care – student is unable to independently exhibit competency with tasks of performing blood glucose monitoring and insulin administration. The student will require a School Health Nurse to perform and manage care. The student should be able to:
   a. Cooperate in all diabetes tasks at school.
   b. Report to School Health Clinic for diabetes management needs.
   c. Cooperate in the delegation of nursing care to provide finger-stick monitoring, treatment of glucose levels, and the calculation/administration of insulin.

Note: According to the American Diabetes Association children and youth should be allowed to provide their own diabetes care at school to the extent that is appropriate, based on the student's development and his or her experience with diabetes.

***Toddlers and preschool-aged children**: Unable to perform diabetes tasks independently and will need an adult to provide all aspects of diabetes care.*
***Elementary school-aged children:** Depending on the length of diagnosis and level of maturity, may be able to perform their own blood glucose checks, but usually will require supervision.*
***Middle school and high school-aged children:** Usually able to provide self-care depending on the length of diagnosis and level of maturity but will always need help when experiencing severe hypoglycemia.*

ACTION PLAN FOR GLUCOSE LEVELS

60 mg/dl or Below	Immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel or 1/3 can of regular soda). Note: Anytime the student becomes unconscious, uncooperative, combative, or cannot take the emergency snack, give Glucagon STAT. Call 911 and then call parent/guardian. Observe the student for hypoglycemic symptoms (altered mental status, shakiness, sweating, or weakness). DO NOT LEAVE THE STUDENT ALONE! Recheck blood glucose in 15 minutes. *If symptoms persist after 15 minutes, give a second emergency snack with simple sugars. *If no symptoms are present after 15 minutes, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
61 – 80 mg/dl	Observe the student for symptoms (altered mental status, shakiness, sweating, or weakness). *If symptoms are present, immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel, or 1/3 can of regular soda). Recheck blood glucose in 15 minutes. *If no symptoms are present, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
81 – 300 mg/dl	The student should follow his normal routine.
Above 300 With Neg – Sm Ketones	If the student has an insulin dose correction order, then give insulin if it has been 3 hours or greater since the last dose of insulin was given. The student should return to class. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids.
Above 300 With Mod – Lg Ketones	Notify parent/guardian. *Refer to Authorization for Administration of Medication Form* for short acting insulin orders for moderate or large ketones. The student should return to class. Restrict physical activity. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids. Recheck blood glucose and ketones prior to student leaving school. Notify parent/guardian if ketones are still present.

SANTA ROSA COUNTY SCHOOL DISTRICT AUTHORIZATION FOR DIABETES MANAGEMENT FORM

Student's Name: (Last, First, M)	Birth Date:	Medicaid #:	Grade/Teacher:	Parent/Guardian Emergency Phone #:

Part I. Student's Self-Care Assessment (Provider to complete initially, School Health Nurse will update as needed).

Students' Competency:	Self-Care	Assisted Care	Dependent Care
Performs Glucose Monitoring			
Determines Insulin Dosage			
Administers Insulin			

Part II. Treatment Plan (To Be Completed By Physician)

Diagnosis: Diabetes Mellitus, _____ Type 1 _____ Type 2

Procedure: Blood glucose monitoring by finger-stick. Check blood glucose before meals and as needed.

ACTION PLAN FOR GLUCOSE LEVELS:

60 mg/dl or below	Immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel or 1/3 can of regular soda). Note: Anytime the student becomes unconscious, uncooperative, combative, or cannot take the emergency snack, give Glucagon STAT, call 911 and then call parent/guardian. Observe the student for hypoglycemic symptoms (altered mental status, shakiness, sweating or weakness). DO NOT LEAVE THE STUDENT ALONE! Recheck blood glucose in 15 minutes. If symptoms persist after 15 minutes, give a second emergency snack with simple sugars. If no symptoms are present after 15 minutes, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
61 – 80 mg/dl	Observe the student for symptoms (altered mental status, shakiness, sweating or weakness). *If symptoms are present, immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel, or 1/3 can of regular soda). Recheck blood glucose in 15 minutes. *If no symptoms are present, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
81 – 300 mg/dl	The student should follow his normal routine.
Above 300 w/ Neg – Sm Ketones	If the student has an insulin dose correction order, then give insulin if it has been three (3) hours or greater since the last dose of insulin was given. The student should return to class. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids.
Above 300 w/ Mod – Lg Ketones	Notify parent/guardian. *Refer to Authorization for Administration of Medication Form* for short acting insulin orders for moderate or large ketones. The student should return to class. Restrict physical activity. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids. Recheck blood glucose and ketones prior to student leaving school. Notify parent/guardian if ketones are still present.

Part III. Authorization for Administration of Medications for Diabetes Mellitus

1. Short Acting Insulin: Humalog / Novolog / Regular (circle one) Dosage: _____
   Administration Time: At meals, special occasion snacks and as needed for Correction/Action Plan.
   Note any untoward side effects: Hypoglycemia (Low blood glucose)
   For Moderate or large ketones: Give correction factor + _____ units if it has been more than three (3) hours since last correction.
2. Insulin Adjustment: Insulin to Carbohydrate Ration: From 1 unit of Humalog/Novolog insulin for every _____ grams of Carbohydrate to 1 unit for every _____ grams of carbohydrate eaten.
   Correction Factor: From 1 unit of Humalog/Novolog insulin for every _____ mg/dl up to 1 unit for every _____ mg/dl above or below blood glucose target of 120 mg/dl.
3. Glucagon: Dosage: _____ mg subcutaneous. Time: STAT as needed for severe hypoglycemia. Call 911 then parent/guardian.
   Note any untoward side effects (nausea, vomiting, and elevated blood sugar).

Print Physician/Provider Name & Address:	Phone:
Physician/Provider Signature:	Date:

Part IV: PARENTAL PERMISSION (To be completed by Parent/Guardian) **Form void if this section is incomplete.**

I hereby request Santa Rosa County School District personnel, or its agents, to assist in Diabetes Management and administration of medications as listed above for my child as prescribed by the doctor. I understand that there is no liability on the part of the school district, its personnel, or agents, including school district and county health department personnel, for civil damages as a result of assisting with these procedures when the person acts as an ordinarily reasonable prudent person would have acted under the same or similar circumstances. I hereby authorize the exchange of medical information regarding my child's treatment plan between the physician and school health personnel of this school district and county health department. If my child is covered by Medicaid and receives health services under an IEP, I consent for the school district to bill Medicaid for these services. I consent for the school district to release and exchange my child's confidential student information to agencies of the State of Florida and to bill Medicaid for these services each time a billable service is provided. This will allow the county public school to receive Medicaid Funding for services it provides my child.

Parent/Guardian Signature: _____ Date: _____

Rev 06/05/2009

Procedure and Guideline for Managing Diabetes (Insulin Pump) in the School Setting

Procedure: I. School personnel and School Health personnel responsibilities

A. Staff education – School personnel must have an understanding of diabetes and its management to facilitate the appropriate care of students with diabetes. It is the responsibility of the School District and the School Health Nurse to implement annual training for each school that has a student with diabetes. Training should include a brief overview for all school based staff, in-depth training for all school based staff that has direct contact with the student; and individualized training to meet specific student needs.

B. Obtain and follow Diabetes Authorization for Insulin Pump Form/physician orders to include the physician's and parent/guardian signatures.
   1. Only a School Health Registered Nurse (RN) or Licensed Practical Nurse (LPN) may obtain verbal physician orders to facilitate management of the student with diabetes or to document a need for change in the student's plan of care.
   2. Original signature is preferred for all physicians' orders, but a faxed order may be accepted.
   3. A student specific *Emergency Health Care Plan (EHCP)* should be developed by a School Health Registered Nurse (RN).
   4. The School Health Registered Nurse (RN) should delegate a trained, competent school-based person(s) to follow the Emergency Health Care Plan and the Diabetes Authorization for Insulin Pump Form/physician orders.

C. Provide a safe, private and accessible space for the finger-stick procedure and for the insulin administration.
   1. The School Health Clinic is the preferred site for these procedures.
   2. Alternative sites for diabetes management may be identified on the Emergency Health Care Plan with consideration of student safety, proximity of the classroom to the School Health Clinic, availability of appropriately trained staff, and the documented level of student competency/responsibility.

D. Provide a trained, competent or licensed person to perform, assist with, or observe the blood glucose monitoring procedure and the insulin administration based on the student's Self-Care Assessment. *Refer to Diabetes Authorization for Insulin Pump.*

E. Unless the physician or nursing documentation allows for the student to perform calculations and insulin administration independently, provide verification of insulin calculation and dosage with the School Health Nurse, the designated school personnel, or the parent/guardian prior to insulin administration.

F. Designated school personnel should be trained and knowledgeable of:
   1. Treatment of hypoglycemic emergencies
   2. Administration of emergency glucose source
   3. Disconnection of the insulin pump

G. Notify appropriate personnel of student health care needs. Notify parent/guardian as indicated on the action plan of the Diabetes Authorization for Insulin Pump Form and/or the Emergency Health Care Plan.

H. Document glucose levels, presence of ketones, and amount of insulin administered on the Diabetic Monitoring Log; record student visit on the Daily Activity Log.
I. Provide carbohydrate counts of foods as documented through the School District's Food Service Department.
J. Provide sharps containers for School Health Clinics.
K. Call for emergency help as needed.

Medication Note – For the safety of all students, medications (pills, insulin, glucagon, etc.) shall be received in the original container, counted, and then stored under lock/key. The student specific EHCP will notate if a student will carry insulin/supplies or if the insulin/supplies will be kept in an alternate site other than the School Health Clinic.

II. Health care provider responsibilities
A. Provide consultation in the development of and maintenance of the student health care needs and management.
B. Complete Diabetes Authorization for Insulin Pump Form upon diagnosis, on a yearly basis, and as needed for changes in diabetes management.
1. Documentation includes the initial Self-Care Assessment of the student's knowledge, skill level, and ability to self-manage care; whether the student needs assistance with care, or if the student is dependent for care.
C. If applicable, complete additional insulin orders/Flexible Insulin Therapy (FIT) upon diagnosis, on a yearly basis, or as needed for changes in diabetes management.
D. Provide phone order to the School Health Registered Nurse (RN) or Licensed Practical Nurse (LPN) in order to facilitate management of student needs with diabetes and/or to initiate a change in the student's plan of care/physicians orders.
E. Provide consultation in training and education of designated school-based providers.

IV. Parent/guardian responsibilities

A. Provide school with completed Diabetes Authorization for Insulin Pump Form, to include physician signature and date. The form must also include the parent/guardian signature and date of permission.
1. Form to be provided upon diagnosis, updated at the beginning of each school year and as needed to initiate change.
B. When applicable, provide the school with additional insulin orders/Flexible Insulin Therapy (FIT) upon diagnosis, at the beginning of each school year, and as needed to initiate change.
C. Notify the school of changes in diabetes orders that may affect medical management during the school day.
D. Participate in the development of the student's Emergency Health Care Plan.
E. Meet with appropriate personnel to establish and maintain services.
F. Authorize the physician to release medical information to appropriate school personnel as per Authorization for Diabetes Management Form.
G. Provide equipment and supplies needed for procedures, treatment and management of diabetic needs, to include hypoglycemic supplies, snacks, and medications.
H. Maintain the calibration of the blood glucose monitor used at school.

I. Provide the school with names and telephone numbers of people to be notified in case of uncertainty in management or in the event of an emergency.
J. Retain responsibility for care that is provided by the personal designee of the parent/guardian, i.e. friend or relative.
K. Accept financial responsibility for 911 calls and transportation to the hospital if needed.

V. Student responsibilities

A. The student's health care provider will determine the level of responsibility of diabetic care as indicated on the Diabetes Authorization for Insulin Pump Form under the student's Self-Care Assessment.
B. The parent/guardian, School Health Nurse, or school administration or designee may request re-evaluation of student's competency whenever indicated.
C. Only the physician or the School Health Nurse may update the student's Self-Care Assessment.
D. Levels of care/responsibility
    1. Self-Care – demonstrates competency, knowledge, skill and ability to perform blood glucose monitoring and insulin administration independently. The student should be able to:
        a. Describe signs and symptoms of hypoglycemia.
        b. Verbalize plan for blood glucose level consistently.
        c. Utilize plan for blood glucose level.
        d. Perform blood glucose monitoring independently, including calibration of monitor to test strip.
        e. Check for ketones with blood glucose level of 300 or higher.
        f. Determine insulin dosage and administer insulin independently.
        g. Troubleshoot insulin pump problems.
        h. Dispose of sharps and store equipment safely and correctly.
        i. Document test results and insulin dosage accurately, when applicable.
    2. Assisted Care – exhibits competency at one or more tasks, but is not yet functioning independently. Student will need assistance from a trained, competent person; parent/guardian; or School Health Nurse. The student should be able to:
        a. Cooperate in all diabetes tasks at school.
        b. Describe some signs and symptoms of hypoglycemia.
        c. Follow plan for blood glucose levels, with assistance as needed.
        d. Perform blood glucose monitoring, with assistance as needed.
        e. Check for ketones with blood glucose level of 300 or higher.
        f. Calculate, or attempt to learn calculations for insulin dosage; verify calculation of insulin dosage with parent/guardian or school-based person(s) unless physician or nursing documentation allows for student's independence.
        g. Self-administer insulin after verification of dosage on pen or syringe with designated personnel.
        h. Troubleshoot insulin pump problems, with assistance as needed.
        i. Dispose of sharps and store equipment safely and correctly.
        j. Document test results and insulin dosage accurately, when applicable.

3. Dependent Care – student is unable to independently exhibit competency with tasks of performing blood glucose monitoring and insulin administration. The student will require a skilled School Health Nurse to perform and manage care. The student should be able to:
    a. Cooperate in all diabetes tasks at school.
    b. Report to School Health Clinic for diabetes management needs.
    c. Cooperate in the delegation of nursing care to provide finger-stick monitoring, treatment of glucose levels, and the calculation/administration of insulin, troubleshoot insulin pump problems.

Note: According to the American Diabetes Association children and youth should be allowed to provide their own diabetes care at school to the extent that is appropriate, based on the student's development and his or her experience with diabetes.

***Toddlers and preschool-aged children**: Unable to perform diabetes tasks independently and will need an adult to provide all aspects of diabetes care.*
***Elementary school-aged children:** Depending on the length of diagnosis and level of maturity, may be able to perform their own blood glucose checks, but usually will require supervision.*
***Middle school and high school-aged children:** Usually able to provide self-care depending on the length of diagnosis and level of maturity but will always need help when experiencing severe hypoglycemia.*

ACTION PLAN FOR GLUCOSE LEVELS – INSULIN PUMP

60 mg/dl or Below	Immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel or 1/3 can of regular soda). Note: Anytime the student becomes unconscious, uncooperative, combative, or cannot take the emergency snack, give Glucagon STAT. If you have given glucagon, disconnect insulin pump, call 911 and parent/guardian. Observe the student for hypoglycemic symptoms (altered mental status, shakiness, sweating or weakness). DO NOT LEAVE THE STUDENT ALONE! Recheck blood glucose in 15 minutes. *If symptoms persist after 15 minutes, give a second emergency snack with simple sugars. *If no symptoms are present after 15 minutes, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
61-80 mg/dl	Observe the student for symptoms (altered mental status, shakiness, sweating, or weakness). *If symptoms are present, immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel, or 1/3 can of regular soda). Recheck blood glucose in 15 minutes. *If no symptoms are present, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
81-300 mg/dl	The student should follow his normal routine.
Above 300 With Neg-Sm Ketones	If the student has an insulin dose correction order, then give insulin if it has been three (3) hours or greater since the last dose of insulin was given. The student should return to class. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids.
Above 300 With Mod-Lg Ketones	Notify parent/guardian. *Refer to Authorization for Administration of Medication Form* for short acting insulin orders for moderate or large ketones. Student to take Insulin Correction by Insulin pen. Student should return to class. Restrict physical activity. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids. Student to take meal bolus by Insulin pen. Recheck blood glucose and ketones prior to student leaving school. Notify parent/guardian if ketones are still present. Self-care students should change infusion site.
Loss of infusion site/pump malfunction	Notify parent/guardian. Self-care students with supplies may reinsert infusion site. Recheck blood glucose in three (3) hours or next scheduled time, whichever occurs first. Student may take correction by insulin pen every three (3) hours if pump is malfunctioning or student is unable to reinsert infusion site.

SANTA ROSA COUNTY SCHOOL DISTRICT AUTHORIZATION FOR INSULIN PUMP

Student's Name: (Last, First, M)	Birth Date:	Medicaid #:	Grade/Teacher:	Parent/Guardian Emergency Phone #:

Part I. Student's Self-Care Assessment (Provider to complete initially, School Health Nurse will update as needed).

Students' Competency:	Self-Care	Assisted Care	Dependent Care
Performs Glucose Monitoring			
Determines Insulin Dosage			
Administers Insulin			

Part II. Treatment Plan (To Be Completed By Physician) Diagnosis: Diabetes Mellitus _____ Type 1

Procedure: Blood glucose monitoring by finger-stick. Check blood glucose before meals and as needed.

ACTION PLAN FOR GLUCOSE LEVELS:

60 mg/dl or below	Immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel or 1/3 can of regular soda). Note: Anytime the student becomes unconscious, uncooperative, combative, or cannot take the emergency snack, give Glucagon STAT. If you have given Glucagon, disconnect insulin pump, call 911 and parent/guardian. Observe the student for hypoglycemic symptoms (altered mental status, shakiness, sweating or weakness). DO NOT LEAVE THE STUDENT ALONE! Recheck blood glucose in 15 minutes. If symptoms persist after 15 minutes, give a second emergency snack with simple sugars. If symptoms are present after 15 minutes, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
61-80 mg/dl	Observe the student for symptoms (altered mental status, shakiness, sweating or weakness). *If symptoms are present, immediately give an emergency snack with simple sugars (e.g. 4 glucose tablets, 1 tube of glucose gel, or 1/3 can of regular soda). Recheck blood glucose in 15 minutes. If no symptoms are present, escort the student to front of the line for meal. If it is not mealtime, give a regular snack before allowing the student to return to class.
81-300 mg/dl	The student should follow his normal routine.
Above 300 w/ Neg-Sm Ketones	If the student has an insulin dose correction order, then give insulin if it has been three (3) hours or greater since the last dose of insulin was given. The student should return to class. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids.
Above 300 w/ Mod-Lg Ketones	Notify parent/guardian. *Refer to Authorization for Administration of Medication* for short acting insulin orders for moderate or large ketones. Student to take Insulin Correction by Insulin pen. Student should return to class. Restrict physical activity. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids. Student to take meal bolus by Insulin pen. Recheck blood glucose and ketones prior to student leaving school. Notify parent/guardian if ketones are still present. Self-care students should change infusion site.
Loss of infusion site/pump malfunction	Notify parent/guardian. Self-care students with supplies may reinsert infusion site. Recheck blood glucose in three (3) hours or next scheduled time, whichever occurs first. Student may take correction by insulin pen every three (3) hours if pump is malfunctioning or student is unable to reinsert infusion site.

Part III. Authorization for Administration of Medications for Diabetes Mellitus

1. Short Acting Insulin: Humalog / Novolog / Regular (circle one) Dosage: _____
   Administration Time: At meals, special occasion snacks and as needed for Correction/Action Plan.
   Note any untoward side effects: Hypoglycemia (Low blood glucose)
   For Moderate or large ketones: Give correction factor + _____ units if it has been more than three (3) hours since last correction.
2. Insulin Adjustment: Insulin to Carbohydrate Ratio: From 1 unit of Humalog/Novolog insulin for every _____ grams of Carbohydrate to 1 unit for every _____ grams of carbohydrate eaten.
   Correction Factor: From 1 unit of Humalog/Novolog insulin for every _____ Mg/dl up to 1 unit for every _____ mg/dl above or below blood glucose target of 120 mg/dl.
3, Glucagon: Dosage: _____ mg subcutaneous. Time: STAT as needed for severe hypoglycemia. Call 911 then parent/guardian.
   Note any untoward side effects (nausea, vomiting, and elevated blood sugar).

Print Physician/Provider Name & Address:	Phone:
Physician/Provider Signature:	Date:

Part IV: PARENTAL PERMISSION (To be completed by Parent/Guardian) Form void if this section is incomplete.

I hereby request Santa Rosa County School District personnel, or its agents, to assist in Diabetes Management and administration of medications as listed above for my child as prescribed by the doctor. I understand that there is no liability on the part of the school district, its personnel, or agents, including school district and county health department personnel, for civil damages as a result of assisting with these procedures when the person acts as an ordinarily reasonable prudent person would have acted under the same or similar circumstances. I hereby authorize the exchange of medical information regarding my child's treatment plan between the physician and school health personnel of this school district and county health department. If my child is covered by Medicaid and receives health services under an IEP, I consent for the school district to bill Medicaid for these services. I consent for the school district to release and exchange my child's confidential student information to agencies of the State of Florida and to bill Medicaid for these services each time a billable service is provided. This will allow the county public school to receive Medicaid Funding for services it provides my child.

Parent//Guardian Signature: _____ Date: _____

Procedure and Guidelines for Using Glucagon as Emergency Response to Hypoglycemia

Purpose: This procedure establishes guidelines for the use of glucagon treatment as an emergency response for hypoglycemia in a student with diabetes in the school environment.

Procedure:

I. Glucagon – a hormone produced by the body that stimulates the liver to raise the blood glucose level

- A. Available in an injectable form for use in diabetics
- B. Must have a health care provider medication order on file to administer

II. Indication for use of glucagon in the diabetic student

- A. Unconsciousness
- B. Seizure activity
- C. When student has low blood sugar and is unable to take liquid or food by mouth due to severe sleepiness, unresponsiveness, etc.

III. Instructions for use of glucagon

- A. Delegate someone to call 911 and parent/guardian; notify school site administration staff.
- B. Position the student lying down on his/her side in a safe area.
- C. Prepare the glucagon.
  1. Remove the flip off seal from the bottle of glucagon.
  2. Remove the needle protector from the syringe.
  3. Inject entire contents of the syringe into the bottle of glucagon.
  4. Shake the bottle gently until the glucagon dissolves and the solution becomes clear.
     - a. Glucagon should not be used unless the solution is clear and of water-like consistency.
     - b. Glucagon should be injected immediately after mixing.
  5. Draw up the appropriate dose (1 mg or 0.5mg, per physician's order) of the solution into the syringe.
- D. Cleanse the injection site on buttock, arm, or thigh with alcohol.
- E. Insert the needle into the loose tissue under the cleansed skin area and then inject the glucagon solution.
- F. Withdraw the needle and apply light pressure at the injection site.
- G. Keep the student in a side-lying position in case of vomiting.
- H. The blood sugar should rise at least 50-75 mg/dl within 15 - 20 minutes.
- I. Feed the student as soon as he/she awakes and is able to swallow.

Ketoacidosis

Definition: Hyperglycemic episodes may result in a serious condition called diabetic Ketoacidosis. This condition happens when insulin levels are far less than the body's need. This may occur because of illness or taking too little insulin. The body starts using stored fat for energy. Ketosis is the build-up of ketone bodies in the blood and urine. If uncorrected, in just a few hours, acid levels can rise in the blood causing Ketoacidosis. Fluids and insulin must be given quickly since Ketoacidosis can lead to coma and even death.

Onset: can be rapid and lead to severe illness or even death

Symptoms: may include dehydration, vomiting, dizziness, abdominal pain, drowsiness, headache, fruity breath, and/or labored breathing

Treatment: **Follow guidelines/physician order on Authorization for Administration of Medication Form**

I. Check for Ketones if the blood glucose level is 300 or higher.

II. Above 300 w/Negative to Small Ketones: If the student has an insulin dose correction order, then give insulin if it has been three (3) hours or greater since the last dose of insulin was given. The student should return to class. Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids.

III. Above 300 w/Moderate to Large Ketones: Notify parent/guardian. *Refer to Authorization for Administration of Medication Form* for short acting insulin orders for moderate or large ketones. The student should return to class. Restrict physical activity (increased physical activity can cause blood glucose to become more elevated and result in further ketone development). Recheck blood glucose and ketones at the next scheduled time or in three (3) hours whichever is first. Do not withhold meal or snack if scheduled at this time. Encourage water or other sugar free fluids. Recheck blood glucose and ketones prior to student leaving school. Notify parent/guardian if ketones are still present.

Carbohydrate Counting

Because carbohydrates affect blood glucose levels more than any other nutrient, they are the major focus of most meal planning approaches. Research has shown no benefit to blood glucose control from avoiding sweets or foods with sugar as long as the carbohydrates are counted. Many sugar-free products such as cookies, candies, and ice cream contain similar amounts of carbohydrates as their regular counterparts. Use of regular products in appropriate portions is preferable.

- Counting carbohydrates by grams involves using food labels and tables to find the amount of carbohydrates in foods.
- A "carbohydrate choice" is the amount of food that contains 15 grams of carbohydrates.

Carbohydrate to Insulin Ratio:

This can be thought of as a variable carbohydrate counting approach. It is the amount of rapid or short acting insulin that is given just before eating, and is calculated based on the amount of carbohydrates by a pre-determined formula. While this approach requires a bit more effort, it affords the student the most flexibility in eating amounts and times, and can lower the risk of low blood glucose.

When carbohydrates are eaten at meals or snacks, the amount of insulin needed can be determined by using the insulin to carbohydrate ratio. This is a pre-determined estimate of how much carbohydrate intake (in grams) one unit of insulin will cover. Often this is expressed as one (1) unit of insulin for every X grams of carbohydrates. An example would be one (1) unit for every five (5) grams of carbohydrates eaten. This ratio will vary from student to student and sometimes from meal to meal.

Typically the dose is given before the meal or planned intake. In some cases it may be better to wait until the food is eaten to calculate insulin dosage based on an actual amount.

To determine the bolus needed, one would determine the total carbohydrates in the food to be eaten and divide it by the number of grams one (1) unit is expected to cover. The answer would be the number of units of rapid or short acting insulin (Humalog, Novolog, or Regular) needed to cover the food the student will be eating.

Sample Calculation:

The student's insulin to carbohydrate ratio is **1:15**
The student is going to eat **57** grams of carbohydrates
57 ÷ 15 = 3.8 units is the dose for carbohydrate coverage

Correction Dose:

An extra insulin dose or bolus is used to correct high blood glucose levels back into target range. A common target is 80 to 150. The target could also be stated as a single number, e.g. 120. The target range (or number) will vary depending on the student and the diabetes health care team.

Often the correction dose is calculated using a formula that has been provided specifically for that student. This correction formula may also be referred to as a "sensitivity" or "supplemental insulin" formula.

The first step is to subtract the number indicated from the actual blood sugar value. This is done to correct the blood glucose down to or within the target range, not to zero.

Next the result is divided by the correction/sensitivity factor. This reflects how much one (1) unit of insulin is expected to drop the blood glucose level or how "sensitive" the student is to insulin. This factor is also student specific and may change from time to time.

Sample Calculation:

The student's blood glucose target is **150** and the correction factor is **50**
The high blood glucose correction formula is
Blood Glucose reading **X** − **150 = X ÷ 50** = **X** units of insulin to be given
The student's blood glucose is **315**
315-150 = 165 ÷ 50 = 3.3 units insulin

IMPORTANT NOTE: *Correction factor cannot be used more frequently than every **three (3) hours** unless specifically ordered by physician.*

Low Blood Sugar Correction Dose/Formula:

Some students may also use a correction formula to manage a low blood glucose occurring at the time of a meal instead of using glucose tablets or juice. A child with a low blood sugar may also have difficulty calculating a correction and should have assistance and or supervision to use this method.

Sample Calculation:

The student's blood glucose target is 150 and the correction factor is 50
Low blood glucose formula for the student is
Blood Glucose reading **X** − **150 = X ÷ 50 = X (negative number)** units insulin to be taken away **(negative number)** from the carbohydrate bolus dose
The student's blood glucose level is **65** just before lunch
65 – 150 = -85 ÷ 50 = -1.7 units (note the negative number)

This amount is taken away **(negative number)** from the bolus to be given for the meal or snack, resulting in a smaller bolus (because of the **negative number**).

The low blood glucose correction method can be difficult to use at school if it takes several minutes of walking to get food and begin eating. There also needs to be some carbohydrates in the meal or snack, which should be consumed first. Otherwise, it would be best to treat the low blood glucose level with 15 grams of fast-acting glucose where and when the reading or symptoms occur in order to prevent blood glucose levels from dropping lower.

Special Alert for Insulin Calculation

Procedure: I. Rules for rounding insulin dosages

A. If using Novo Pen Jr.
   a. 0.3 or 0.4 → round up to 0.5 units
   b. 0.7 or higher → round up to 1 unit
B. If using a regular pen or syringe
   a. 0.5 or higher → round up to 1 unit

II. If blood glucose reading is "HHH", instruct student to wash hands and recheck blood sugar. If reading is still "HHH", use the number 500 for calculating the correction factor.

III. If student fails to check blood glucose reading prior to eating a meal, do not use correction factor.

A. Only administer insulin to cover carbohydrate intake.
B. Notify parent/guardian.

IV. Correction factor cannot be used more frequently than every three (3) hours unless specifically ordered by physician.

A. When students eat a special snack or an early meal (i.e. half days), only use carbohydrate ratio for calculating insulin dose.

V. If blood sugar level is 60 or below at mealtime

A. Follow action plan for glucose levels.
B. Use the last blood glucose level obtained for calculating insulin dosage if blood sugar is checked more than once.
C. Include all carbohydrates consumed after the last blood glucose level was obtained to calculate the insulin dosage.
D. If confused or uncertain, call the School Health Supervisor/Nurse.

VI. Students consuming a carbohydrate free snack or a snack with less than five (5) grams of carbohydrates **will not** require insulin coverage.