Diabetes Care Tasks at School: What Key Personnel Need To Know

HYPERGLYCEMIA
GOAL: OPTIMAL STUDENT HEALTH AND LEARNING

Managing hyperglycemia is a vital piece of a comprehensive plan.
LEARNING OBJECTIVES

Participants will be able to understand:

- Symptoms of high blood glucose
- Treatment of high blood glucose
- Reduce risk of high blood glucose
- Short- and long-term risks and complications
VOCABULARY

HYPERglycemia – too HIGH a level of glucose in the blood

Ketones – (ketone bodies) Chemicals that the body makes when there is not enough insulin in the blood and the body must break down fat for energy

Diabetic ketoacidosis (DKA) – an acute metabolic complication of diabetes characterized by excess acid in the blood which can be life threatening

Ketone testing – a procedure for measuring the level of ketones in the urine or blood

Glucose – a simple sugar found in the blood; the fuel that all body cells need to function
HYPERGLYCEMIA

HYPERglycemia = HIGH Glucose (sugar)

Onset:

• Usually slow to develop to severe levels
• More rapid with pump failure/malfunction, illness, infection
• Can mimic flu-like symptoms
• Greatest danger: may lead to diabetic ketoacidosis (DKA) if not treated

DMMP should specify signs and action steps at each level of severity

• Mild
• Moderate
• Severe
HYPERGLYCEMIA: POSSIBLE SIGNS AND SYMPTOMS

Mild Symptoms
- Lack of concentration
- Frequent urination
- Sweet, fruity breath
- Weight loss
- Stomach pains
- Thirst
- Flushing of the skin
- Blurred vision
- Increased hunger
- Fatigue/sleepiness

Moderate Symptoms
- Dry mouth
- Stomach cramps
- Vomiting
- Nausea

Severe Symptoms
- Labored breathing
- Profound weakness
- Confusion
- Unconscious
HYPERGLYCEMIA: RISKS AND COMPLICATIONS

• Hyperglycemia, if untreated, can lead to DKA and potentially to coma and/or death (mainly in type 1)

• Interferes with a student’s ability to learn and participate

• Serious long-term complications develop when glucose levels remain above target range over time or are recurring
HYPERGLYCEMIA: WHAT TO DO

**Goal:** lower the blood glucose to target range.

**Action steps, following DMMP**

- Verify with blood glucose check
- Check ketones
- Allow free use of bathroom and access to water
- Administer insulin
- Recheck blood glucose
- Call parent/guardian
- Note any patterns, communicate with school nurse and/or parent/guardian
HYPERGLYCEMIA: POSSIBLE CAUSES

- Late, missed or too little insulin
- Food intake exceeds insulin coverage
- Decreased physical activity
- Expired or improperly stored insulin
- Illness, injury
- Stress
- Other hormones or medications
- Hormone fluctuations, including menstrual period
- Any combination of the above
PREVENTION OF HIGHS

- **Timing** is very important - stick to the schedules:
  - Meal time, insulin administration, physical activity

- **Accuracy** is very important
  - Insulin dose, monitoring the amount and type of food eaten

- **Changes** should only be made after consultation with the parent/guardian and/or school nurse
  - Snack, meal, or insulin or physical activity times or amounts
INFORMATION FOR TEACHERS

• Students with hyperglycemia or hypoglycemia often do not concentrate well.

• Students should have adequate time for taking medication, checking blood glucose, and eating.

• During academic testing, provide accommodations as per 504 plan or IEP
  – Check blood glucose before and during testing, per plan
  – Access to food/drink and restroom
  – If a serious high or low blood glucose episode occurs, students should be excused with an opportunity for retake
“Make The Right Choice The Easy Choice”

Eliminate barriers to diabetes management:

• Become familiar with and follow students’ written plans

• Eliminate barriers to:
  – *Snacking*
  – *Blood glucose checks*
  – *Access to water and bathrooms*
  – *Insulin administration*

• Avoid “good or bad” judgments based on individual blood glucose readings

• Communicate with parent/guardian and school nurse
Module 3 Pre – and Post – Tests: HYPOGLYCEMIA

This tool may be freely duplicated and distributed for training purposes
1. What is the most serious immediate danger to the student with diabetes?
   1. Running out of diabetes supplies
   2. Forgetting a scheduled blood glucose monitoring
   3. Hypoglycemia (low blood glucose)
   4. Forgetting to refrigerate insulin

2. What causes hypoglycemia?
   a. Too much insulin
   b. Too little food or delayed meal/snack
   c. Unanticipated physical activity
   d. All of the above

3. Sweating is a symptom of hypoglycemia.
   3. True
   4. False

4. If no blood glucose meter is available, treat for hypoglycemia.
   4. True
   5. False

5. Which of the following is the best treatment for hypoglycemia?
   a. Water
   b. M & M’s
   c. 4 oz. of orange juice
   d. Carrot sticks

6. What is glucagon?
   6. A sugary gel given to treat hypoglycemia
   7. A naturally occurring hormone
   8. A blood glucose test
   9. None of the above

7. When is a glucagon injection needed?
   a. Shakiness
   b. Inability to swallow
   c. Hunger
   d. Sweating
WHERE TO GET MORE INFORMATION

American Diabetes Association
1-800- DIABETES
www.diabetes.org/safeatschool