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

BLOOD GLUCOSE MONITORING

American Diabetes Association
Blood glucose monitoring (BGM) is a vital piece of a comprehensive management plan.
LEARNING OBJECTIVES

Participants will be able to understand:

- Why blood glucose is monitored
- When blood glucose should be monitored
- How to perform a blood glucose check
- Required equipment

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BLOOD GLUCOSE MONITORING

GOAL:
- Maintain blood glucose within target range

IMMEDIATE BENEFIT:
- Maximize learning and participation
- Identification, treatment, and prevention of lows and highs

LONG-TERM BENEFIT:
- Decrease risk of long-term complications
- Maximize health

CHALLENGE:
- Many variables impact blood glucose
ROLE OF THE SCHOOL

In accordance with DMMP:

- Facilitate blood glucose monitoring
- Act on blood glucose check results
- Document results of BGM when assistance or supervision is provided
- Communicate BGM results to parent/guardian or school nurse to monitor for trends
ANY TIME, ANY PLACE MONITORING

For students who can self-check:

- Improved blood glucose control
- Safer for student
- Student gains independence
- Less stigma
- Less time out of class
- Assists decision making in response to result
BLOOD GLUCOSE MONITORING TECHNOLOGY

• Simply, easy to use
• Small meters
• Reliable results (with smaller samples)
• Options for alternate (to finger poke) site testing
• Enhanced electronic functions to record, share, and analyze data

Limitation – unknown blood glucose between checks
WHAT IS CGM?

How it works:

• A tiny glucose-sensing device called a "sensor" is inserted just under the skin and remains for 6-10 days

• The sensor measures glucose in the tissue and sends the information to a receiver
  • Receiver = manufacturer-issued display device, smart device or insulin pump

• The system automatically records a glucose value every 1-5 minutes

• Some CGM provide alarms to signal when glucose is out of target range
USE BLOOD GLUCOSE OR CGM?

• Some CGMs are indicated for treatment decisions – but not all

• Blood glucose levels should be monitored with a blood glucose meter in accordance with the student’s DMMP
BASIC STEPS

• **Know** the target range per DMMP

• **Check** at times specified in DMMP

• **Immediate Action** - Treatment to get back within target range
WHEN TO CHECK?

DMMP specifies for an individual student

Regularly scheduled checks:

- Routine monitoring before meals and snacks
- Before, during and/or after physical activity
WHEN ELSE TO CHECK?

Per DMMP, extra checks may be necessary:

- Hypoglycemia or hyperglycemia symptoms
- Change in diabetes management
- Periods of stress or illness
- Prior to academic tests
- Early or delayed release from school
- Continuous glucose monitor (CGM) alarms
LANCING DEVICES

**Lancets**

**Pen-type Lancing Devices**

![FastClix Lancing Device Kit](image)

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KNOWING THE METER

- Features vary:
  - Sample size
  - Wait time
  - Alternate-site testing capacity
  - Communication with other devices – pumps, continuous glucose monitors

- Become familiar with operation of meter
  1-800 number on back of meter
PREPARATION

1. Gather blood glucose monitoring supplies:
   - Lancet
   - Test strips
   - Meter

2. Student washes and dries hands thoroughly

3. If assisting or performing for student, put on disposable gloves

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READYING THE METER

4. Turn the meter on

5. Check code # (if required)

6. Insert a strip into the meter
LANCING THE FINGER

7. Hold the lancet device to the side of the finger and press the button to stick the finger.

- **Alternative site (per DMMP)** the school nurse and/or parent/guardian will give further instructions which sites are appropriate.

- **Note:** In the case of suspected hypoglycemia, only the finger should be used for blood glucose sampling.
8. Follow instructions included with the meter when applying blood to strip

- Drop, not smear
- Cover **ALL** of test strip window
- Some strips wick blood onto the strip
9. Wait until blood glucose results displayed
10. Dispose of lancet and strip
11. Record blood glucose results, take action per DMMP
WHAT DOES THE DISPLAY MEAN?

- Check manual
- Contact manufacturer (1-800; Website)
WHAT DOES THE NUMBER MEAN?

- Reference student’s target range
  - Individualized for student
  - May vary throughout day
  - Take action per DMMP

- Communicate sensitively

- Recognize value may vary according to time since eating, insulin, or physical activity
Module 4 Pre – and Post – Tests:

BLOOD GLUCOSE MONITORING

This tool may be freely duplicated and distributed for training purposes
1. Which of the following can affect blood glucose levels?
   a. Insulin
   b. Food
   c. Physical Activity
   d. Stress/Illness
   e. All of the above

2. Blood glucose ranges are individualized for each student.
   a. True
   b. False

3. Students who are able to self-manage should be able to check their blood glucose in the classroom.
   a. True
   b. False

4. When should blood glucose levels be routinely checked?
   a. Every hour
   b. Before meals and snacks
   c. Every time student comes to the clinic
   d. According to the schedule in the student’s DMMP
   e. Never at school

5. Blood glucose levels are monitored using:
   a. Urine test strip
   b. Continuous glucose monitor
   c. Meter
   d. a and c
   e. b and c
WHERE TO GET MORE INFORMATION

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