

## DIABETES CARE TASKS AT SCHOOL

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What Key Personnel Need To Know

# HYPOGLYCEMIA



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# GOAL:

## Optimal Student Health and Learning

Managing hypoglycemia (low blood glucose) is a vital piece of the Diabetes Medical Management Plan (DMMP).



# Learning Objectives

## **PARTICIPANTS WILL BE ABLE TO UNDERSTAND:**

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Symptoms of low blood glucose

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Treatment of low blood glucose

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Reduce risk of low blood glucose

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Short- and long-term risks and  
complications

# Vocabulary

**GLUCOSE:**

Fuel that all body cells need to function

**HYPOGLYCEMIA:**

A LOW level of blood glucose

**GLUCOSE TABLETS OR GEL:**

Special products that deliver a pre-measured amount of pure glucose. They are a fast-acting form of glucose used to counteract hypoglycemia.

**QUICK-ACTING GLUCOSE:**

Source of simple sugar that raises blood glucose levels. Examples are juice, regular soda, glucose tabs or gel, or hard candy.

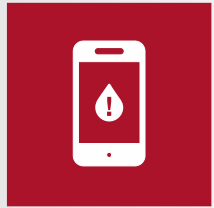
**CARBOHYDRATE:**

Source of energy/nutrient for the body which raises blood glucose levels

**GLUCAGON:**

Hormone given nasally or by injection that raises blood glucose levels in the blood

# Hypoglycemia



**Hypoglycemia = LOW blood glucose (sugar)**

**Onset:**

- Sudden and must be treated immediately
- May progress to unconsciousness if not treated
- Can result in brain damage or death

**Diabetes Medical Management Plan (DMMP) should specify signs and action steps at each level of severity**

- Mild or Level 1 (glucose < 70mg/dL)
- Moderate or Level 2 (glucose level < 54mg/dL)
- Severe or Level 3 (severe cognitive impairment, seizure)

# Hypoglycemia: Risks and Complications

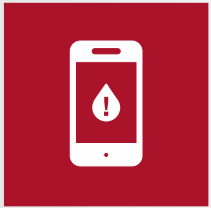
Early  
recognition  
and  
intervention  
can prevent an  
emergency

Greatest  
immediate  
danger

Not always  
preventable

Impairs  
cognitive and  
motor  
functioning

# Hypoglycemia: Possible Causes



- Too much insulin
- Too little food or delayed meal or snack
- Extra or unplanned physical activity
- Illness
- Medications
- Stress

# Hypoglycemia: Possible Signs and Symptoms

## Mild to Moderate Symptoms

- Extreme Hunger
- Shakiness
- Weakness
- Paleness
- Dizzy or lightheaded
- Increased heart rate
- Yawning
- Irritability/frustration
- Extreme tiredness/fatigue
- Sleepiness
- Changed behavior
- Sweating
- Anxiety
- Dilated pupils
- Restlessness
- Confusion
- Sudden crying

## Severe Symptoms

- Inability to eat or drink
- Unconscious
- Unresponsive
- Seizure activity or convulsions (jerking movements)

# Mild to Moderate Hypoglycemia: What to Do

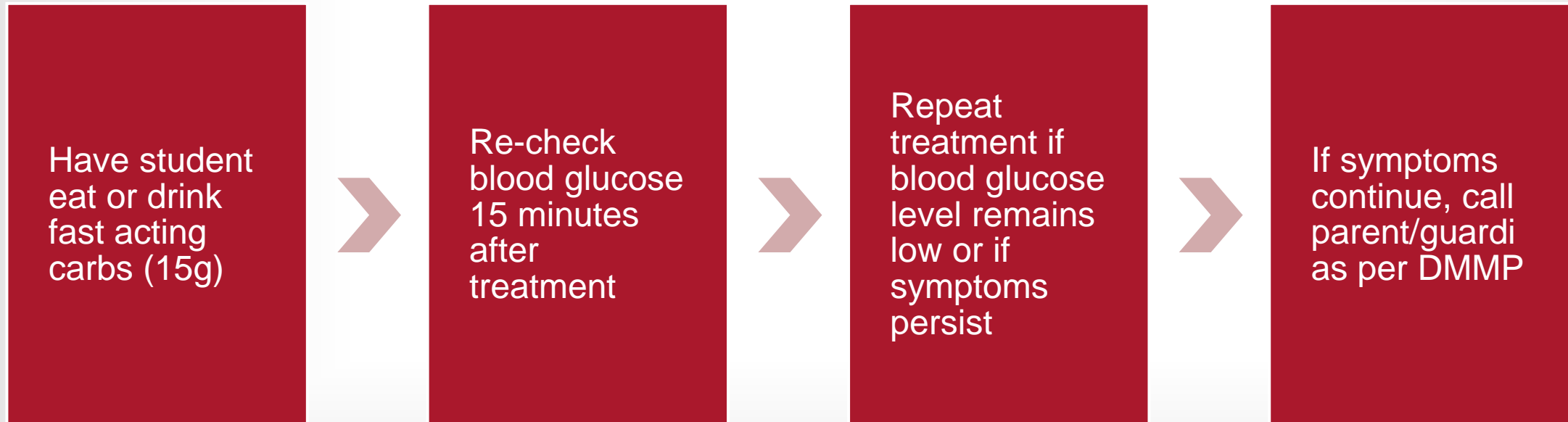
**INTERVENE  
PROMPTLY.**

Follow DMMP.

- Check blood glucose if meter available
- If no meter is available, treat immediately. When in doubt, always treat. If untreated, may progress to more serious events.
- **NEVER send a student with suspected low blood glucose anywhere alone**
- Consider “Rule of 15”

## “Rule of 15”

THESE ARE GENERAL GUIDELINES, FOLLOW DMMP FOR EACH STUDENT:



# Quick acting glucose for low treatment



## TREATMENT FOR LOWS: 15 GRAMS OF CARBOHYDRATE

- 4 oz. fruit juice
- 3–4 glucose tablets
- 1 tube of glucose gel
- 4–6 small hard candies
- 1–2 tablespoons of honey
- 6 oz. regular (not diet) soda (about half a can)
- 4 tsp. table sugar

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# Severe Hypoglycemia Symptoms

Inability to eat or drink

Unresponsive

Unconsciousness

Convulsions (seizures)

# Severe Lows: What to Do



**RARE, BUT LIFE THREATENING IF NOT TREATED PROMPTLY:**

- Place student on their side
- Lift chin to keep airway open
- Provide glucagon, per student's DMMP
- Never give food or put anything in the student's mouth
- Call 911, then parent/guardian
- Student should respond in 10 to 20 minutes
- Remain with the student until help arrives

# Prevention of Lows



- Physical activity, insulin, eating, checking blood glucose **per schedule**
- Keep a quick-acting sugar source with the student **ALWAYS**
- Treat at onset of symptoms
- Ensure reliable insulin dosing, per DMMP
- Pre-meal/snack insulin dose should be based on anticipated carbohydrates
  - Watch picky eaters
  - Provide nutritional information to parent/guardian
  - Provide substitute carbohydrate if they do not consume enough carbohydrates for the calculated insulin dosing
  - DMMP may specify after-meal dosing

# Prevention of Lows



- Consult with parent/guardian or school nurse when snack, meal or physical activity times must be changed
- Monitor blood glucose variations on gym days
  - An extra snack may be required ½ hour before gym or during prolonged vigorous physical activity, per DMMP
- A student should never be unattended when a low blood glucose is suspected. Maintain adult supervision.

# 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 a student’s individual 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

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## **Module 6 Pre- and Post-Tests:**

# **HYPOGLYCEMIA**

This tool may be freely duplicated and distributed for training purposes

# DIABETES CARE TASKS AT SCHOOL

- 1. What is the most serious immediate danger to the student with diabetes?**
  - a. Running out of diabetes supplies
  - b. Forgetting a scheduled blood glucose monitoring
  - c. Hypoglycemia (low blood glucose)
  - d. 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.**
  - a. True
  - b. False
- 4. If no blood glucose meter is available, treat for hypoglycemia.**
  - a. True
  - b. False
- 4. 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
- 5. What is glucagon?**
  - a. A sugary gel given to treat hypoglycemia
  - b. A naturally occurring hormone
  - c. A blood glucose test
  - d. None of the above
- 5. When is a glucagon (injection or nasal powder) needed?**
  - a. Shakiness
  - b. Severe hypoglycemia, unconscious, or seizures
  - c. Hunger
  - d. Sweating

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# Disclaimer

This presentation is not intended to provide legal or health care advice. Please consult with a legal or health care professional regarding your specific questions or needs.

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# Where to Get More Information



**AMERICAN DIABETES ASSOCIATION**

1-800-DIABETES (342-2383)

[DIABETES.ORG/SAFEATSCHOOL](https://diabetes.org/safeatschool)