

TREATING HYPOGLYCEMIC EVENTS HANDOUT

Objectives:

1. Recognize possible causes of hypoglycemia
2. Identify signs and symptoms of hypoglycemia
3. Classify levels of hypoglycemia
4. Review nonpharmacologic management of hypoglycemic events
5. Distinguish differences between hypoglycemic medications

Education Needs Assessment:

In internal medicine resident clinics, there are a high percentage of patients with a diagnosis of diabetes mellitus. The clinic staff, consisting of nurses, pharmacists, social workers, and physicians, work collaboratively to determine the best course of treatment to manage hypoglycemia in patients with Type 1 (T1DM) and Type 2 diabetes (T2DM). Patients with T1DM typically use insulin to manage their diabetes. Patients with T2DM commonly manage their diabetes with oral medications and insulin. Even though the treatment of the patient's disease may be different, symptoms of hypoglycemia present the same. Therefore, the general approach to treatment of hypoglycemia is the same regardless of the type of diabetes. Severe hypoglycemia can be life threatening if untreated. Education of appropriate management of hypoglycemia is crucial for the staff in order to relay the information to patients and their caregivers. The pharmacy and nursing staff, along with the clinic's social worker, frequently educate patients regarding signs and symptoms of hypoglycemia. This presentation will aid to increase the staff's knowledge on how to educate patients on critical blood glucose levels, signs and symptoms of hypoglycemia as well as treatment options for hypoglycemia.

Description of Active Learning:

Recognize possible causes of hypoglycemia (10 minutes)

Identify signs and symptoms of hypoglycemia (5 minutes)

Classify levels of hypoglycemia (5 minutes)

Review nonpharmacologic management of hypoglycemic events (10 minutes)

Distinguish differences between hypoglycemic medications (20 minutes)

Questions regarding goals, signs and symptoms of hypoglycemia and options for management of hypoglycemia will be posed to the attendees. Discussion of cases as well as multiple choice and matching questions will be reviewed based on the evidence presented.

Knowledge Test:

1. What are the possible causes of hypoglycemia? **Select all that apply.**
 - a. Increased exercise
 - b. Eating too much for lunch
 - c. Injecting too much insulin
 - d. Injecting too little insulin
2. What are the signs and symptoms of hypoglycemia? **Select all that apply.**
 - a. Increased thirst
 - b. Sweating

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- c. Coma
- d. Dry mouth

3. Match glucose levels to the correct reference range.

Fasting	A. 54-70 mg/dL
Postprandial	B. No identifiable level
Level 1 Severity	C. <70 mg/dL
Level 2 Severity	D. 80-130 mg/dL
Level 3 Severity	E. <180 mg/dL

4. Match the most appropriate characteristic with the appropriate hypoglycemia/glucagon product.

Baqsimi	A. Can be used for all ages
Gvoke	B. Can be stored in fridge or room temp
Zegalogue	C. Only glucagon autoinjector
GlucaGen HypoKit	D. Inhaled glucagon

5. AB a 35 yo Caucasian female was diagnosed with type 2 diabetes three weeks ago. She was started on Lantus 30 units at bedtime. Her daughter came home and found AB on the floor unresponsive. The daughter knows there are a couple of options available in cases of severe hypoglycemia. Which of the following medications would be the most appropriate based on its FDA approved indication?

- a. Gvoke
- b. Baqsimi
- c. Zegalogue
- d. Glucagen Hypokit