

POST-TEST: Understanding supplemental nutrition for hospital patients with diabetes
CNE 1.19 contact hours

Learning objectives

1. Differentiate between enteral and parenteral nutrition.
2. Discuss how to manage hypoglycemia and hyperglycemia in patients with diabetes who are receiving supplemental nutrition.
3. Describe insulin use in patients with diabetes who are receiving supplemental nutrition.

Purpose/goal: To provide nurses with information on how to better care for patients with diabetes who are receiving supplemental nutrition.

1. Your critically ill patient with diabetes was well nourished, but starting with admission, she has been unable to take food by mouth. Based on recommendations, when should parenteral nutrition begin?

- a. After 48 hours without oral intake
- b. After 72 hours without oral intake
- c. After 7 days without oral intake
- d. After 10 days without oral intake

2. The average dextrose delivery in parenteral nutrition (PN) solutions is:

- a. 1.9 kcal/g.
- b. 2.3 kcal/g.
- c. 3.4 kcal/g.
- d. 4.8 kcal/g.

3. Which of the following is an option for delivering PN?

- a. Jejunostomy
- b. Nasoduodenal tube
- c. Gastric tube
- d. Central venous catheter

4. Which statement about the composition of enteral nutrition (EN) is correct?

- a. Carbohydrates account for 49% to 53% of calories.
- b. Carbohydrates account for 72% to 80% of calories.
- c. The typical caloric goal is 10 to 18 kcal/kg/day.
- d. The typical caloric goal is 5 to 12 kcal/kg/day.

5. Which statement about hyperglycemia and mortality in patients receiving nutritional support is correct?

- a. Compared to PN, EN increases hyperglycemia risk nearly twofold.
- b. Compared to EN, PN increases hyperglycemia risk nearly twofold.
- c. Patients whose blood glucose (BG) level stays above 220 mg/dL during PN therapy have an increased risk of death.
- d. Patients whose blood glucose (BG) level stays above 220 mg/dL during PN therapy have a decreased risk of death.

6. Which statement related to hyperglycemia in patients with diabetes who are receiving nutritional support is correct?

- a. Incretin hormones stimulate the actions of glucagon.
- b. Incretin hormones increase gluconeogenesis.
- c. Hyperglycemia decreases levels of inflammatory cytokines
- d. Hyperglycemia increases levels of inflammatory cytokines.

7. In noncritically ill patients, the recommended target premeal BG level measures:

- a. between 80 and 120 mg/dL.
- b. between 90 and 130 mg/dL.
- c. between 100 and 140 mg/dL.
- d. between 125 and 150 mg/dL.

8. Which statement about insulin use during EN therapy is correct?

- a. Giving 24-hour basal insulin may increase hypoglycemia risk if EN therapy is interrupted unexpectedly.
- b. Premixed 70/30 insulin given once daily may be safer than long-acting insulin in patients receiving continuous tube feedings.
- c. The recommended starting total daily dose of insulin can be calculated at 0.5 to 0.8 units/kg.
- d. Long-acting insulin is safer than premixed insulin for patients receiving continuous tube feedings.

9. An additional injection of neutral-protamine Hagedorn (NPH) or premixed 70/30 insulin may be required halfway through the feeding if nocturnal EN feeding time exceeds:

- a. 3 hours.
- b. 5 hours.
- c. 10 hours.
- d. 15 hours.

10. Your patient is receiving bolus tube feedings. You would expect her BG levels to be covered with a dose of:

- a. long-acting analog insulin given with each bolus feeding.
- b. rapid-acting analog insulin given 2 hours after each bolus feeding.
- c. intermediate-acting analog insulin given 1 hour after each bolus feeding.
- d. rapid-acting analog insulin given with each bolus feeding.

11. For patients with preexisting diabetes, the recommended starting dose for insulin in the PN solution is:

- a. 0.2 units/g of dextrose.
- b. 0.4 units/g of dextrose.
- c. 0.6 units/g of dextrose.
- d. 0.8 units/g of dextrose.

12. Which statement about insulin for patients with preexisting type 1 diabetes is accurate?

- a. They require supplemental insulin twice daily.
- b. They require basal insulin at all times.
- c. Their basal insulin can be withheld for 4 hours.
- d. They should receive long-acting insulin.

13. Which statement about refeeding syndrome is correct?

- a. Insulin increases glucose levels by driving cellular uptake of glucose to use for energy.
- b. To reduce the chance of refeeding syndrome for patients at risk, start feedings at a higher rate.
- c. Refeeding syndrome can occur when a previously malnourished patient receives a high carbohydrate load.
- d. Patients at risk for refeeding syndrome include those who haven't been fed for 1 day.

14. Neuroglycopenic signs and symptoms of hypoglycemia include:

- a. palpitations.
- b. confusion.
- c. paresthesia.
- d. tremors.

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