Insulin Safety

EDUCATIONAL OBJECTIVES

Upon completion of this activity, participants will be better able to:

1. List key safety precautions that need to be communicated to patients who use insulin;
2. Discuss common misconceptions that patients have about the use of insulin products;
3. Describe proper insulin injection techniques; and
4. List open-ended questions to ask patients to assess if they need further counseling by a pharmacist.

Post-Test/Rationale:

1. Which of the following describes the proper method of insulin needle disposal?
   A. Flush them down the toilet
   B. Return them to the pharmacy
   C. Place them in a red regulation sharps container ***
   D. Wrap them in newspaper and throw them in the trash

Correct answer: C

Rationale: It is important to dispose of syringes properly to avoid injury to anyone that may come in contact with used insulin products or devices. A sharps container is the safest option.

2. Insulin is considered a “high alert” medication because:
   A. It is expensive
   B. It is an injectable
   C. It is measured in units
   D. Errors in insulin use can lead to serious consequences ***

Correct answer: D

Rationale: Insulin is a medication that, if not dosed accurately, can lead to very low or very high blood sugar levels, which could constitute a potential medical emergency.

3. Which of the following is a type of basal insulin?
   A. Insulin glargine ***
   B. Insulin glulisine
C. Regular insulin
D. Insulin lispro

Correct answer: A

Rationale: Insulin glargine is a basal or long-acting insulin. The other choices are all examples of rapid-acting insulin, which is delivered as a bolus dose.

4. What is the correct unit of measurement for insulin?
   A. Grams
   B. Liters
   C. Units ***
   D. Milligrams

Correct answer: C

Rationale: Insulin is only measured in units.

5. Prior to use, insulin should be stored:
   A. At room temperature
   B. In the freezer
   C. In the refrigerator ***
   D. Outside

Correct answer: C

Rationale: Insulin that is not being used should be stored in the refrigerator.

6. Which of the following is an insulin product that can be purchased without a prescription?
   A. Insulin glargine
   B. NPH Insulin ***
   C. Insulin degludec
   D. Insulin detemir

Correct answer: B

Rationale: NPH insulin, along with regular insulin and combination products, can be purchased without a prescription. These insulins can be purchased in vials, but not in pen devices.
7. Which of the following injection sites allows the fastest absorption of insulin?
   A. Abdomen ***
   B. Arm
   C. Thigh
   D. Buttocks

Correct answer: A

Rationale: Injecting insulin in the abdomen generally leads to the fastest absorption.

8. When self-administered, insulin is injected:
   A. In the muscle
   B. In a vein
   C. Under the skin ***
   D. In an artery

Correct answer: C

Rationale: Insulin is injected subcutaneously, or under the skin.

9. A patient is prescribed 10 units of insulin daily. What size insulin syringe would be best for measuring and administering this dose?
   A. 0.5-ml syringe
   B. 1-ml syringe
   C. 0.3-ml syringe ***
   D. 10-ml syringe

Correct answer: C

Rationale: The syringe that is best for insulin administration generally depends on the dose. A dose of 10 units is considered a small dose, and, since it is less than 30 units, the 0.3-ml syringe would be the most appropriate choice.

10. What type of insulin is given intravenously (IV) in the hospital setting?
    A. Insulin glulisine
    B. Insulin detemir
C. Regular insulin ***
D. Insulin cannot be given IV

Correct answer: C

Rationale: Regular insulin is the only insulin that can be given IV.