

## Mosby's Nursing Video Skills

### Procedure Guideline for Preparing Insulin

1. Perform hand hygiene and ensure privacy.
2. Introduce yourself to the patient and family if present.
3. Identify the patient using two identifiers.
4. Verify the health-care provider's orders.
5. Determine the patient's blood glucose level and when the patient's next meal will be.
6. Preparation and administration must be timely, taking into consideration mealtimes. Usually the time between injecting rapid-acting insulin and eating a meal is no more than 5 to 15 minutes. For short-acting insulin, the time interval is 20 to 30 minutes before a meal.
  - A. Rapid-acting types, such as insulin lispro, aspart, and glulisine:
    - (1) Begin to act in 15 to 30 minutes
    - (2) Peak effects occur in 1 to 3 hours
    - (3) Last 3 to 6½ hours
  - B. Short-acting types, such as regular insulin:
    - (1) Begin to act in 30 minutes to 1 hour
    - (2) Peak effects occur in 1 to 5 hours
    - (3) Last 6 to 10 hours
  - C. Intermediate-acting types, such as isophane (NPH) insulin suspension:
    - (1) Begin to act in 1 to 2 hours
    - (2) Peak effects occur in 6 to 14 hours
    - (3) Last 16 to 24 hours
  - D. Long-acting types, such as Detemir or Levemir:
    - (1) Begin to act in 0.8 to 2 hours
    - (2) Are non-peaking.
    - (3) Last up to 24 hours
7. The various types of insulin are not interchangeable and cannot be substituted for one another without the approval of the prescriber.
8. Select the ordered insulin from the medication cart or automated medication dispensing unit. Follow your agency's "No Interruption Zone" policy.
9. Compare the insulin label with the medication administration record.
10. Check the expiration date on the vial.
11. If the medication has been refrigerated, allow it to come to room temperature before administering it. Inspect the insulin for changes that may indicate a loss of potency such as clumping, frosting, precipitation or altered color or clarity.
12. If a correction scale or sliding scale is used, obtain a current bedside blood glucose. Check the MAR and note the correct amount to draw up based on the patient's current blood glucose reading.
13. Select an injection site: in an upper arm, the anterior or lateral aspect of the thigh, the buttocks, or the abdomen. Avoid the 2-inch radius around the umbilicus.
  - A. When choosing a site, consider the expected absorption rate. Insulin is absorbed fastest when injected into the abdomen, followed by the arms, thighs, and buttocks.

- B. Remember to rotate sites within a selected anatomical region, such as the abdomen.
  - C. When all sites have been used, the patient may select another region, such as the thigh, or start the rotation pattern over again in the same region.
14. Draw up the insulin, as shown in the Video Skill “Preparing Injections from a Vial,” or mix a combination of insulin, as shown in the Video Skill “Drawing Up More Than One Type of Insulin.”
  15. Compare the vial of the insulin and the amount drawn up in the syringe with the MAR.
  16. Have another registered nurse verify the correct type and amount of insulin drawn up.
  17. If you draw up insulin away from the patient’s bedside, label the syringe with the insulin indicating the type and amount of insulin it contains.
  18. When teaching patients to use an insulin administration pen, demonstrate how to remove the cap, insert and secure the disposable needle, and dial the prescribed number of units.
  19. Have the patient demonstrate the insulin injection, as shown in the Video Skill, “Administering Subcutaneous Injections.” Patients should demonstrate insulin self-administration whenever possible.
  20. Dispose of used supplies, clean up your work area, and perform hand hygiene.
  21. Help the patient into a comfortable position, and place toiletries and personal items within reach.
  22. Place the call button within easy reach, and make sure the patient knows how to use it to summon assistance.
  23. To ensure the patient’s safety, raise the appropriate number of side rails and lower the bed to the lowest position.
  24. Document insulin administration immediately afterwards.