

F-150 Intramuscular Injections/Z-track

No more than 3 ml should be given intramuscularly in one site. A maximum of 2 ml may be given to an adult in the deltoid area.

Purpose

Administer medication into the deep muscle tissue for absorption and systemic effect.

Applies To

Registered Nurses

Licensed Practical/Vocational Nurses

Other (*Identify*): _____

Equipment/Supplies

- Syringe: adult: 2- 3 ml syringe; children/infants: 1- 2 ml syringe.
- Needle: adult: 19-23 gauge, 1-1½ inches; children/infants: 25-27 gauge, ½-1 inch.
- Alcohol prep pads.
- Disposable gloves.
- Medication ampule or vial.
- Sharps container and trash bag.

Procedure

1. Wash hands. Refer to the Hand Washing procedure.
2. Explain procedure to client.
3. Don clean gloves.
4. Select appropriate injection site. Assess size and integrity of muscle. *Palpate for areas of tenderness or hardness. Note areas of bruising or infection.*
Possible sites include:
 - a. Vastus lateralis.
 - b. Ventrogluteal.
 - c. Dorsogluteal.
 - d. Deltoid.
5. Prepare medication according to the Preparing Injections from Ampules and Vials procedure.
6. Assist the client into a comfortable position, depending on the site chosen. Relocate site. *If administering injection to a child, secure the child for the procedure to prevent injury.*

7. Cleanse the injection site with alcohol prep pad. Start at center and rotate outward in circles, approximately two inches.
8. Remove needle protector, pulling it straight off.
9. Position syringe with needle at a 90° angle.
10. Inject needle:
 - a. Spread the skin of the injection site taut with the thumb and index finger of non-dominant hand.
 - For adults and children, inject needle quickly at 90° angle into the muscle.
 - For infants (Vastus lateralis), inject needle quickly at 45° angle, pointed toward the knee.
 - b. Use the Z-track method for medications that are likely to cause irritation and/or staining of skin:
 - Create air lock by drawing up 0.2 ml of air into syringe.
 - Pull the overlying skin and subcutaneous tissue, approximately 1-1½ inches laterally to the side.
 - Hold the skin taut with the non-dominant hand and inject needle deep into the muscle.
11. Secure syringe with non-dominant hand. Using dominant hand, slowly pull back on the plunger to aspirate. Avoid moving the syringe. If using Z-track method, hold skin tightly with non-dominant hand. If blood appears in the syringe, the needle is in a vein. Withdraw needle, discard, and begin procedure again.
12. Slowly inject medication.
13. Withdraw needle and cover site with alcohol prep pad. If using Z-track method, maintain needle in place for ten seconds after injecting the medication. Release skin after withdrawing the needle.
14. Massage site gently. **DO NOT MASSAGE INJECTION SITE IF Z-TRACK METHOD IS USED.**
15. Remove alcohol prep pad and assess injection site.
16. Dispose of needle and syringe in sharps container. *Do not recap needles.*
17. Remove gloves and dispose of supplies per Agency Waste Disposal Policy.
18. Wash hands. Refer to Hand Washing procedure.

Documentation Guidelines

Document in clinical record:

1. Medication name, dose, route, site, and time administered. caregiver instructions and response to teaching assessment of site and any pertinent findings.
2. Report of any adverse reactions given to the physician.

Related Procedures

Preparing Injections from Ampules and Vials.

Policy History

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