CAREPATHrx™
Specialty Pharmacy & Infusion Solutions

TITLE: INTRAMUSCULAR INJECTIONS	POLICY NUMBER: NUR009
URAC STANDARDS: N/A	ACHC STANDARDS: DRX5-1D, DRX5-5E, DRX7-81 DRX7-21A
TJC STANDARDS: IC.02.01.01, MM.05.01.07, MM.06.01.01, MM.06.01.03, MM.07.01.01, NPSG.01.01.01, PC.02.01.01, PC.02.01.03, PC.02.02.05, PC.02.03.01	
EFFECTIVE DATE: 1/1/2021	REVISION DATE: 7/1/23, 7/6/26
REVIEWED DATE: 12/1/22, 7/1/23, 7/6/26	APPROVAL AUTHORITY: DAVID BENEDICT, PRESIDENT

I. POLICY

An intramuscular injection is a technique of administering medication deep into the muscle. This allows the medication to be absorbed into the bloodstream quickly. Intramuscular injections are contraindicated in patients with low platelet counts, coagulation defects or muscle atrophy.

II. PROCEDURES

A. Supplies:

1. Gloves
2. Antiseptic wipe
3. Medication (vial or prefilled syringe)
4. Syringe, if withdrawing medication from a vial (appropriate for amount of medication being administered)
5. Needle, for administration:
6. 22 to 25 gauge, 1 to 1 ½ inches long for adults
7. 22 to 25 gauge, 5/8 to 1 inch for toddlers and children
8. Needle, if withdrawing medication from a vial
9. Gauze
10. Sharps container

B. Verify patient using 3 identifiers.

C. Review the prescriber's order. Verify the medication matches the medication label. Compare the medication to prescriber's order and medication label to ensure right patient, right dose, right route of administration, rate of administration, and total volume to infuse.

D. Prior to use, allow medication or solution to reach room temperature according to medication label or manufacturer's instructions for use in order to avoid the pain provoked by the injection of a cold solution.

E. Perform hand hygiene (Refer to Infection Control policy on Hand Hygiene).

F. Clean and disinfect the work area using an appropriate disinfectant.

G. Explain the procedure and educate the patient/caregiver:

1. Risks, benefits, and goals of treatment
2. Aseptic technique and hand hygiene
3. Medication preparation
4. Proper administration technique. If patient/caregiver will be doing self-administration, utilize the teach-back method to assess patient/caregiver's understanding of instructions.
5. Signs and symptoms of a reaction
6. Side effects of treatment and management
7. Safe storage of medication and supplies
8. Disposal of medications, supplies and equipment
9. The appropriate provider of treatment (the prescriber OR the pharmacist; BOTH the prescriber and the pharmacist) to contact during business hours, the availability of an answering system to receive calls during evenings, nights, weekends and holidays and the accessibility of a pharmacist or nurse 24 hours a day, 7 days a week. Notify pharmacy by calling the number listed at the top of the medication label. (Refer to Nursing Policy BEST PRACTICE GUIDELINES, ALGORITHM FOR NOTIFICATION OF PHARMACIST AND PROVIDER).

H. Gather all equipment on the cleaned, disinfected, aseptic field.

I. Inspect supplies for product integrity and function before use. Inspect packaging for damage. Inspect vial(s)/syringe for cracks, particulate matter, and clarity of medication. Verify the medication expiration date.

J. Immediately prior to equipment assembly, hand hygiene will be repeated, and non-sterile gloves will be donned.

K. Prepare the medication(s) for injection according to medication label or package insert.

L. If the medication is supplied in a vial, refer to the teaching sheet for Withdrawing Medication from a Vial for guidance.

M. Place the patient in a comfortable position.

N. Select a site:

1. Select areas with intact skin and adequate muscle
2. Deltoid muscle of the arm
3. Ventrogluteal muscle of the hip
4. Dorsogluteal muscle of the buttocks
5. Vastus lateralis muscle of anterolateral thigh (Toddlers and children)
6. Avoid areas where there is bruising, swelling, hardness, irritation, damaged skin, thigh if peripheral edema exists

O. Site recommendations:

1. Separate two injections given in the same muscle by a minimum of 1 inch
2. The deltoid muscle is used for injections of small volume, usually equal to or less than 2 ml
3. The ventrogluteal site on the hip is used for injections which require a larger volume to be administered, up to 3 mls, and for medications which are known to be irritating, viscous, or oily.
4. The dorsogluteal muscle may be used for up to 4 mls.

P. Perform skin antisepsis to the injection site selected. Use a friction scrub for at least 30 seconds and allow the site to dry for 60 seconds.

Q. Prepare the medication syringe for injection by removing air from syringe and confirming dose.

R. Insert the needle at a 90-degree angle into the muscle. Do not aspirate unless recommended on package insert (Aspirating for blood to rule out injecting into a blood vessel is not recommended, as the injection sites do not contain large blood vessels and aspiration results in greater pain).

S. If administering by Z-track method, pull the skin and subcutaneous tissue to the side of the injection site before inserting the needle. Slowly inject the medication. Once the medication has been administered, wait 10 seconds before removing the needle. Once the needle is removed, release the tissue.

T. Slowly push the plunger of the syringe to inject the medication.

U. Withdraw the needle. DO NOT RECAP. Engage safety device, if applicable.

V. Discard the used needle into a puncture-resistant sharps container.

W. Use gauze to apply light pressure to the injection site.

X. Remove and discard gloves and perform hand hygiene

Y. Possible Adverse Reactions to monitor for:

1. Pain
2. Abscess at the injection site
3. Nerve injury
4. Bleeding
5. Swelling
6. Redness

Z. Post Injection Monitoring

1. Refer to medication package insert or therapy specific guidelines for post injection monitoring.
2. In the absence of specified instructions for post injection monitoring, the nurse will remain with the patient for at least 30 minutes following first and subsequent medication administration(s) of specialty injections, to monitor vital signs (temperature, pulse, respirations, and blood pressure) and response to therapy.

III. DOCUMENTATION

A. Medication name, dose, and route of administration
B. Site of injection

C. Needle gauge and length
D. Patient's response to injection
E. Any adverse events
F. Education provided both verbal and written

IV. REFERENCES

Accreditation Commission for Health Care (1/2026). *ACHC Standards*

Crawford, Cecelia L. MSN, RN; Johnson, Joyce A. PhD, RN-BC. To aspirate or not: An integrative review of the evidence. *Nursing Critical Care*: September 2012 - Volume 7 - Issue 5 - p 9-15

JoEllen Wolicki, BSN, RN and Elaine Miller, RN, BSN, MPH (25 September 2019). "Vaccine Administration". *The Pinkbook*. *CDC*. Retrieved 12 September 2020. "Aspiration is not recommended before administering a vaccine."

"Vaccine administration practices: Canadian Immunization Guide". *www.canada.ca*. 2020-12-02. Retrieved 2021-05-25. "Aspiration before injection of vaccine is not recommended, as there are no large blood vessels at the recommended immunization sites and not aspirating before injection has been demonstrated to reduce pain."

Praktisk info om vaksinasjon". *Folkehelseinstituttet* (in Norwegian). Retrieved 2021-05-25. "However, it is not recommended to aspirate before intramuscular and subcutaneous vaccine injection provided that the vaccine is placed in the appropriate place … does not involve the risk of injecting intravenously because there are no large blood vessels in these sites. Aspiration can cause the vaccination to be more painful because it takes longer to give the vaccine."

You Call The Shots. Vaccine Administration: Needle Gauge and Length. https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html

Vallie, Sarah. "Z-Track Injections: When and How to Perform Them." *WebMD, WebMD,* Z-Track Injections: When and How to Perform Them (webmd.com)