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# SUBCUTANEOUS INJECTIONS

**Section:** Nursing
**Compliance:** ACHC Infusion Pharmacy
**ACHC Standards:** DRX2-10D, 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
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## I. POLICY

A subcutaneous injection is a technique of administering medication into the tissue layer between the skin and muscle. Medication administered by the subcutaneous route is usually absorbed more slowly than if administered via alternative routes. Medications administered by subcutaneous injection include but are not limited to: insulin, Heparin, Vitamin B-12, pain medications, local aesthetics, anti-emetics, allergy shots, growth hormones, recombinant human erythropoietins and colony stimulating factors. For administration of antineoplastic drugs, Herceptin Hylecta, or Phesgo, refer to package insert or drug specific CLINICAL GUIDELINE. Advantages of subcutaneous injections over other routes of administration include: less pain, lower risk of infection and multiple injection sites.

## 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, if withdrawing medication from a vial, typically 25 to 27 gauge, 3/8 to 5/8 inches long
6. Gauze
7. Band-Aid
8. Sharps container

B. Verify patient using 2 identifiers.

C. Review prescriber's order. Verify the medication matches the medication label. Compare medication or solution 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 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 CarepathRx (2022). Hand Hygiene, NUR 018).

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

G. Explain procedure and educate 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, Nurse, and Dietician 24 hours a day, 7 days a week. Notify pharmacy by calling the number listed at the top of the medication label; (Refer to CarepathRx (2022). BEST PRACTICE GUIDELINES, NUR 002; II. ALGORITHM FOR NOTIFICATION OF PHARMACIST AND PROVIDER).

H. Gather all equipment on a clean, disinfected, aseptic field.

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

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

K. Prepare medications for injection according to medication label or package insert

L. Refer to (CarepathRx (2022). *Withdrawing Medication from a Vial, NUR014)* if medication is supplied in a vial.

M. Place patient in a comfortable position.

N. Select a site. The choice of site is based on the medication being administered, refer to package insert. (Heparin is almost always administered in the abdomen). Consider patient's comfort and preference.

1. Select areas with intact skin and adequate subcutaneous tissue
2. Abdomen (at least 2 inches from umbilicus)
3. Back or side of upper arm
4. Upper area of buttock
5. Thighs

6. Avoid areas where there is bruising, swelling, hardness, irritation, damaged skin, side of mastectomy, thigh if peripheral edema exists

O. Site rotation recommendations:

1. Rotate site used for each administration.
2. New sites should be at least 1 inch from previous administration site.

P. The maximum volume generally accepted for an SC injection is 2 ml, although higher volumes (of up to 3 ml) can be administered if necessary.

Q. Perform skin antisepsis using a friction scrub for at least 30 seconds and allow to dry for 60 seconds.

R. Prepare syringe for injection.

S. Pinch the skin between your thumb and index finger and quickly insert needle at a 45- or 90-degree angle into the tissue. Do not aspirate unless recommended on package insert.

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

U. Withdraw the needle. DO NOT RECAP.

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

W. Use gauze to lightly apply pressure to the injection site. **Note: If Heparin is administered subcutaneously, do not apply pressure to the site.** Apply Band-Aid if desired.

X. Remove and discard gloves and perform hand hygiene

Y. Adverse Reactions:

1. Pain
2. Redness
3. Swelling
4. Drainage
5. Hematoma
6. Itching

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. DOCUMENT:

1. Medication name, dose and route of administration
2. Site of injection
3. Needle gauge and length

4. Patient's response to injection
5. Any adverse events
6. Education provided both verbal and written

**REFERENCES**

Accreditation Commission for Health Care (7/21/2022). *ACHC Standards*

The Joint Commission. (2022). *Joint Commission Resources E-dition*

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