

**CONSIDERATIONS:**

1. Disposable insulin pens:
  - a. Come filled with insulin, usually with 300 units
  - b. When no more insulin doses are left in the pen, the pen is discarded. Pens are usually sold in boxes of 5.
  - c. A separate prescription is required for pen needles
2. Before using any insulin pen, review the specific manufacturer's instructions. Pens are constantly being improved. General practice guidelines include:
  - a. Never share pens between patients. Insulin pens are for single patient use. They can transmit blood-borne pathogens
  - b. Use a new needle for each injection
  - c. Insulin pen needles have two covers over the needle: an outer plastic shield and inner shield
  - d. After needle is attached to pen, the needle needs to be primed
  - e. When starting a new cartridge or disposable pen, you may need to dial several units to prime the needle
  - f. If the wrong dose is dialed into the pen, read manufacturer's instructions for correcting the dose. Some pens can be dialed backwards and some cannot
3. Insulin pen advantages:
  - a. Easier to use and carry than vials and syringes
  - b. Easier to assure correct dose each time
  - c. Some pens can dose in half-unit increments (Humapen Luxura HD and Novopen Junior)
4. Insulin pen disadvantages:
  - a. Pen devices, their needles, cartridges are more expensive than vials and syringes
  - b. Not all insulin is available for use with pens
  - c. Because insulin comes in a cartridge, insulin cannot be mixed. However, some types of pre-mixed insulin are available in pen form e.g., Novolog 70/30
5. The Lily HumanPen® Memoir has a memory and requires confirmation of current date and time before using for the first time. Do not store this pen in the refrigerator as condensation may form and damage the electronics. This pen is used infrequently.
6. Store in-use pens at room temperature. Store all pens not being used in the refrigerator. Refer to manufacturer instructions for expiration guidelines.).

**EQUIPMENT:**

Insulin pen

Pen needle (patient/caregiver)

- a. VNA staff must use a safety needle if administering the insulin. If patient does not possess a safety

needle, the VNA nurse will use the safety needle included in the nursing bag.

- b. Non-safety needles may be used by patients and caregivers administering insulin. VNA nurses will instruct patients and caregivers about the availability of safety needles.
- c. Non-safety needles will include an outer shield for use after the injection is given in order to remove and dispose of the needle. This procedure will only be performed by the patient/caregiver.

Safety pen needle (nurse)

Alcohol

Gloves

Puncture-proof container

**PROCEDURE:**

1. General to all pens:
  - a. Adhere to Standard Precautions
  - b. Review the Plan of Care for insulin orders including, type, dose, and frequency
  - c. Check the insulin type, concentration and expiration date
  - d. Gather all necessary supplies and place onto a clean surface close to the patient/caregiver
  - e. Explain procedure and what to expect to the patient/caregiver
2. Preparing the Injection
  - a. To attach the needle:
    - i. Wipe the end of the cartridge and holder with alcohol and allow to dry
    - ii. Remove the paper seal from the needle unit
    - iii. Screw needle onto the cartridge at a 90° angle
    - iv. Pull off the outer plastic shield from the needle and set aside
    - v. Pull off the inner plastic shield and discard
  - b. If using a disposable pen that contains NPH (Humulin N or Humulin 70/30), roll pen between fingers 10 times to mix.
  - c. To prime the needle:
    1. Check that dose selector is at zero
    2. Turn knob clockwise to 2 units
    3. Press the button at the end of pen until insulin comes out of the tip of needle
    4. Repeat process if this does not occur
    5. Pen should be primed before each injection
3. Administer the injection:
  - a. Clean the injection site with alcohol and let dry
  - b. Turn the dial clockwise to the desired dose. If the pen cannot be set to the full dose required, there is an insufficient amount of insulin left in the container. In this circumstance, the patient or caregiver can choose to inject the amount left in the container and then prepare a new pen to give a second injection of the remaining dose.

Alternately, the patient or caregiver can choose to discard the old pen with the partial dose remaining in the container and prepare a new pen for the full dose.

- c. Insert needle at 90° angle and press dose button on end of pen until it locks into place.
  - d. Press dose button all the way to zero. Retain the needle in the skin for an additional ten seconds after the dose button reaches zero to ensure the full amount is absorbed in the skin.
4. After the injection, the needle must be removed from the pen. Safety needles automatically retract following injection, allowing for safe removal and disposal. Standard needles which may be in use by patients or caregivers do not retract. Patients/caregivers will be instructed to place the outer shield over the needle and to unscrew and dispose of the needle in an appropriate receptacle.

**AFTER CARE:**

1. Encourage patient/caregiver discussion about the experience, confidence and commitment to performing the procedure.
2. Update the care plan to reflect the identified ongoing patient/caregiver educational needs.
3. Document in the patient record:
  - a. Date, time, name of insulin, route, site and dose
  - b. Patient's response to procedure
  - c. Instructions given to patient/caregiver and ability to teach back use of insulin pen
  - d. Communication with physician

**REFERENCE:**

American Diabetes Association (2003). Position Statement – Insulin Administration. Diabetes Care. Retrieved May 4, 2012 from [http://care.diabetesjournals.org/content/26/suppl\\_1/s121.full.pdf+html](http://care.diabetesjournals.org/content/26/suppl_1/s121.full.pdf+html)

Centers for Disease Control (2012). CDC Clinical Reminder: Insulin Pens Must Never Be Used for More than One Person. Retrieved May 4, 2012 from <http://www.cdc.gov/injectionsafety/clinical-reminders/insulin-pens.html>

Federal Drug Administration (2012). Information for Healthcare Professionals: Risk of Transmission of Blood-borne Pathogens from Shared Use of Insulin Pens. Retrieved May 4, 2012 from <http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/DrugSafetyInformationforHealthcareProfessionals/ucm133352.htm>

Gebel, E (2012). 2014 Consumer Guide - Insulin Pens. Diabetes Forecast, January 2014; <http://forecast.diabetes.org> pp 68-69

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