CONSIDERATIONS:

1. A bolus of a medication delivered “IV push” introduces a concentrated dose of medication directly into the systemic circulation via a vein.
2. Some drugs cannot be given IV push and must be diluted and administered by infusion.
3. Some agencies may not allow drugs to be given IV push. Discuss with supervisor and check agency policy.
4. If medication kept refrigerated, assure it reaches at least room temperature before administering.
5. Carefully calculate dose as bolus allows little margin for errors.
6. Confirm I.V. catheter or access device patent prior to administration.
7. Do not give if insertion site appears puffy, edematous, or reddened or if I.V. fluids do not flow at ordered rate. Injection into surrounding tissue can cause pain, sloughing of tissues, and abscess.
8. Administering medication too quickly can cause serious negative outcomes, including death:
    a. Review information regarding rate
    b. Use less concentrated drug solution whenever possible
    c. Review amount medication patient will receive each minute, recommended concentration, and rate of administration
9. Use large 5 - 10 mL or larger syringe for administration. Smaller syringes create too much pressure.

EQUIPMENT:

Watch with second hand
Medication may come in pre-filled syringe
Syringe, at least 5 cc or larger, if needed
Needleless port access device, if needed
Gloves
Antiseptic swab
Alcohol pads
2 prefilled saline flush syringes, if needed
1 prefilled heparin syringe, if needed
Puncture proof sharps container

PROCEDURE:

1. Check order for medication, dose, frequency, route, rate, pre and post flushes, and heparin flush.
2. If patient has continuous infusion, determine compatibility of medication with fluids and additives.
3. Identify patient using two identifiers. Adhere to Standard precautions. Cleanse hands.
4. Prepare medication and flushes, if ordered to maintain line patency:
    a. Saline flush is preferred method. Prepare 2 syringes with ordered amount 0.9% sodium chloride
    b. If heparin flush ordered, prepare syringe with ordered amount along with 2 sodium chloride syringes
5. Explain procedure to patient.
6. Perform hand hygiene. Don gloves.
7. Assess I.V. site.
8. I.V. push with fluids infusing:
    a. Check for compatibility of medication with infusing fluid. If not compatible, you will need to stop the infusion and follow procedure under step 9
    b. Select injection port of I.V. tubing closest to patient
    c. Clean port with antiseptic swab, allow to dry
    d. Connect syringe to I.V. line; insert needleless tip of syringe through center of port
    e. Occlude I.V. line by pinching tubing just above injection port
    f. Pull back plunger gently to aspirate blood return. (Small gauge needle in vein may not allow return. If I.V. site does not show S/S infiltration and fluids infusing without difficulty, may proceed with injection)
    g. Release tubing when not injecting medication, allowing fluid to flow
    h. Pinch tubing; inject medication at ordered rate
    i. Withdraw syringe; recheck I.V. fluid rate
    j. Immediately dispose of needles and/or syringe in sharps container
9. IV push without other infusion:
    a. Prepare flush solutions
    b. Administer medication: Observe site during injection for sudden swelling:
        i. Cleanse injection port with antiseptic swab, allow to dry
        ii. Insert syringe with sodium chloride through injection port
        iii. Pull back gently on plunger, check for blood return
        iv. Flush with sodium chloride, pushing slowly on plunger
        v. Remove syringe; discard in sharps container
        vi. Cleanse injection port with antiseptic swab, allow to dry
        vii. Insert syringe with medication
        viii. Inject medication within amount of time recommended, use a watch to time
        ix. Withdraw syringe; discard in sharps container
        x. Cleanse injection port with antiseptic swab, allow to dry
        xi. Insert syringe with sodium chloride and inject at same rate medication delivered
        xii. Remove syringe, discard in sharps container

xiii. If heparin flush ordered. Cleanse injection port with antiseptic swab, allow to dry
xiv. Insert syringe with heparin
xv. Inject heparin slowly
xvi. Remove syringe, discard in sharps container

10. Discard soiled supplies in appropriate receptacle.
11. Doff gloves. Wash hands.

AFTER CARE:

1. Document in patient record.
   a. Medication name, flushes/amount pre and post medication, dose, time, route, and patient identifiers
   b. Response to medication/flushes, include any adverse reaction
   c. Instruction given to patient/caregiver; comprehension
   d. Communication with physician as indicated based on patient condition
2. Instruct patient/caregiver to observe site for 48 hours; call nurse if swelling occurs.
3. Patients and caregivers who are independently responsible for management of I.V. medications need to understand all aspects of administration safely. Document returns demonstration.

REFERENCE:

Perry, A. & Potter, P. (2010). Administering Medications by Intravenous Bolus in *Clinical Nursing Skills & Techniques (7th* Ed.) (pp. 616-620). St. Louis, Missouri: Mosby, Inc., an affiliate of Elsevier, Inc.