

### **Intravenous Therapy Guidelines**

Check your state's nurse practice act to determine what aspects of intravenous therapy, if any, your state will allow the LPN/LVN to perform. With the continuation of the nursing shortage, a few states have expanded their LPN practice act to allow licensed LPNs to perform a variety of intravenous therapy functions. Other states are considering expanding their practice acts accordingly.



## Intravenous (IV) Line Connection Safety

When connecting an IV solution or disconnecting a line, always trace the line to where it connects to the patient to make certain that it is an IV line and connects to an IV device. Many mistakes have been made by connecting an IV fluid to the wrong device.

All equipment and fluids used for IV therapy must be sterile and safe for administration. Before any plastic bag or bottle of solution is added to an IV set, it must be checked for leaks and possible contamination (Safety Alert 3–3).

When a new bottle of fluid or additional medication is added to an IV infusion already in progress, strict surgical asepsis must be observed. Each time a new unit of solution or medication is added to an IV setup, there is a danger of introducing bacteria into the patient's blood system. Because of the danger of incompatibility, it is essential that the nurse check each drug and each solution to be certain they can be mixed. *Always wash your hands just before handling IV fluids and equipment*. The port on the IV tubing into which the administration set of a piggyback medication is to be attached must be carefully and thoroughly wiped with a fresh alcohol swab before the tubing is attached to the container.

# Communication Cues 5–1

## **Recovering from Abdominal Surgery**

- **MRS.** WILSON: "I'm very afraid of falling, breaking a hip, and adding to my troubles."
- **NURSE:** "By taking the medication and being more comfortable, you'll feel more like doing your exercises. That's how you can help prevent postoperative complications such as pneumonia or blood clots."
- MRS. WILSON: "I certainly don't want pneumonia or a blood clot!"
- **NURSE:** "Moving about more will also increase circulation and help your wound to heal faster."
- **MRS.** WILSON: "O.K., I'll take the pain medication if it will help me prevent complications."

# Box 3–4 The "Five Rights" Applied to Intravenous (IV) Therapy

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#### Be sure you have:

- The right solution with or without additives as ordered; the correct solution to follow what has been infusing
- The right dose (amount) of solution and additive as ordered
- The right route (peripheral IV, peripherally inserted central catheter [PICC], central line, port)
- The right time (to infuse)
- The right patient as identified with two identifiers

#### Additionally,

- Teach the patient the reason for administration of the fluid and/or drug and signs and symptoms of problems to report to you.
- Check for drug and latex allergies.
- Be aware of potential interactions with IV medications or irrigating solutions.
- Maintain sterility of all solutions, tubing, and connections.



Whenever the patient who has an IV infusing is up out of bed, recheck the drop rate once he is settled back in bed. The fluid drop rate often changes when the patient is up and moving around.

If the IV slows down and has not been checked and readjusted for some time, **no attempt should be made to "catch up"** a large volume of fluid by speeding up the rate of flow beyond that ordered. This can lead to circulatory overload and a volume excess that may produce pulmonary edema in susceptible people. Table 3–8 presents points to check when an IV solution will not run at the prescribed rate.

# Elder Care Points

Elderly people and those with either renal or cardiac conditions cannot tolerate rapid administration of fluids. Check an infusing IV for these patients every 30 minutes.

**Think Critically About** . . . How would you calculate the rate of flow for an order for "1000 mL of  $D_5W$  [dextrose 5% in water] over 8 hours" using a drip set that delivers 15 gtt/mL? How would the rate differ if the drip set delivers 20 drops (gtt)/mL? How would you calculate the flow rate for an order for "250 mL NS [normal saline] at 50 mL/hour" using a microdrip set (60 gtt/mL)?