vitalcare INFUSION SERVICES

Patient Education: "Infusing Your Parenteral Nutrition"

Introduction

Your home care nurse will give you detailed instructions on how to administer your Parenteral Nutrition (sometimes referred to as TPN or PN). This teaching sheet is intended to provide "reminders", and should be used in addition to detailed demonstration and instruction.

Your PN will be administered through an intravenous (IV) catheter using an electronic pump to control the flow rate. We have prepared this booklet to make it easier to learn what you need to know. Please feel free to call your home care nurse or pharmacist if you have any questions on your infusion. Always feel free to ask questions or express concerns during your learning process.

Key Points about Your Parenteral Nutrition Therapy

- Your PN and supplies will be delivered on a regular schedule. Usually they are delivered once per week. You may get a "supply check" phone call before your delivery. Be prepared to let the pharmacy know how many bags of PN you have left, and your remaining stock of supplies.
- The supplies you will typically receive include:
  - The solution containers of Parenteral Nutrition;
  - A mechanical (electronic) infusion pump;
  - Administration tubing for the infusion pump which will contain filters for the administration tubing (0.2 micron or 1.2 micron);
  - Vials of multi-vitamins (MVI) and possibly other medications;
  - Syringes with needles to draw the medications and inject them into the PN container;
  - Alcohol swab pads;
  - Saline and heparin flush solution for catheter flushing; and
  - Catheter materials such as dressings and needle-free access devices ("caps").
- Your supplies should be kept away from children and pets, in a closed storage box in an area that is dry and dust free.
- **NOTE: 0.2 micron filters are used for PN solutions that are "clear". PN solutions that contain lipids (white, milky fat) cannot pass through**

these filters. If administering PN that is white, you must use a 1.2 micron filter.

- Your PN should be given on a regular schedule based on your prescriber's prescription. The schedule varies from one patient to another. You should discuss your schedule with your nurse or pharmacist.
- Your PN infusion might be given on a "cyclic" schedule (a continuous infusion for part of the day), or on an "around the clock" continuous schedule. This is based on your prescriber's prescription and on how well you tolerate the infusion rate.
- One of the most important points in infusion of PN is **infection control**. Please follow all your nurse's instructions regarding hand washing, and using **aseptic technique**, which prevents contamination of your supplies and your catheter.
- Your PN will be given using an electronic pump. Please notify your pharmacy *immediately* if you notice anything unusual in the pump's operation.
- Before administering your daily bag of PN, it must be allowed to return to room temperature. Remove it from the refrigerator 2-4 hours before administration.
- The PN must be inspected for any cloudiness, particles, or crystals before administration.
- If your PN solution includes lipids (white, milky fat) you must check the bag before administration for "cracking". Your nurse will show you how to look for a slick oily layer on the top of the solution. **NEVER** infuse a bag that has "cracked". A brown streak visualized in the solution is another reason that the solution should not be used. If another bag of solution is not available, notify the nurse or pharmacist.

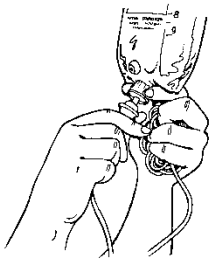
Supplies

- Room temperature bag of PN
- Administration tubing
- Filter (if not already pre-attached to your administration tubing
- Electronic pump
- Syringe containing MVI and other additive medications as prescribed
- Alcohol wipe pads

Steps

1. Prepare a clean working area.
2. Assemble your supplies.
3. Wash your hands as instructed by your home care nurse.
4. Inspect your PN container. If your PN contains lipid, check for "cracking" (oil slick on top surface of solution).

5. Turn the bag upside down in front of a white and black background. Watch for crystals, particles, or ANY sign of cloudiness or streaking.
6. Clean the injection port on the bottom of the PN container with an alcohol wipe pad. Add the multi-vitamin and any other prescribed additive medication. Turn the bag upside down to mix.
7. Remove the administration (pump) tubing from its wrapper. Close the clamp.



8. If you are using separate filters, remove the filter from its wrapper, remove the protective covers from the male filter end and the end of the pump tubing. Attach the filter to the end of the pump tubing.
9. Remove the protective covers from the spike port of the PN, and the spike of the administration tubing. Insert the spike into the spike port. Twist the spike to securely seat it into the PN.
10. Squeeze the drip chamber (if one is present) on the tubing and fill the chamber half way.
11. Slowly open the tubing clamp and allow the tubing and filter to fill with PN solution. Close the clamp when the solution reaches the tip of the tubing.
12. Open the door assembly to the electronic pump. Following your nurse's instructions and the pump user manual, insert the tubing into the pump. Make sure all "free flow" protection is engaged.
13. Close the door of the pump. Check the pump program and "reset" the pump to begin the infusion cycle.
14. Clean the needle free access device with alcohol and flush your catheter with _____ cc saline as taught by your home care nurse. (Also, see "Patient Education: Flushing Your Venous Catheter").
15. Remove the protective cover from the end of your pump tubing, and attach the pump tubing to the needle free access device.
16. Turn on the pump to begin the infusion.

When the Infusion is Complete

1. Turn off the infusion pump.
2. Disconnect the pump tubing from the catheter's needle-free access device.
3. Post-flush the catheter as taught by your nurse.
4. Throw away all used supplies as instructed.

When to Call Your Nurse or Pharmacist

Please report any of the following signs or symptoms immediately:

- You are unable to flush your catheter;
- You notice swelling, redness, or pain in your arm or shoulder on the side of your venous catheter;
- You have contaminated your bag of PN and need another replacement bag as soon as possible;
- You see cloudiness, streaking, particulates or "cracking" in your bag of PN;
- You experience fever (>100.5), chills, or nausea when you begin your PN infusion;
- You have symptoms of "allergy", such as itching, swelling, shortness of breath or difficulty breathing;
- You have ringing in your ears during infusion;
- Weight gain of more than five (5) pounds in a week;
- Swelling in your hands and feet; and
- When your glucose level, if measured routinely at home, is above the following: _____.

Notes and Instructions