Form: D-5377

Taking Care of Your Home Parenteral Nutrition

A guide for patients and families

This book will help you learn about Parenteral Nutrition (PN) and how to give yourself PN when you are home.

Patient Education

UHN
Toronto General
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What's inside

Parenteral Nutrition

Read this part to learn:

- what parenteral nutrition (PN) is
- how it works
- the benefits of PN

What is parenteral nutrition?

Most of us eat food to get the nutrients our bodies need. Normally the food you eat breaks down in your stomach and goes into your bowels. Your bowel absorbs the nutrients, and they get carried to the rest of your body by your blood.

Nutrients can help your body heal. But, sometimes you can’t eat any or enough food because of an illness. For example, your stomach or bowel may not be working normally because of surgery. When this happens, you can get nutrients in a different way. One way is Parenteral Nutrition or PN.

How does PN work?

PN is a special liquid food mixture we give you through an intravenous (IV) catheter. PN looks similar to a regular IV line, but we use different liquid. The mixture contains nutrients like proteins, carbohydrates, fats, vitamins and minerals.

PN doesn’t go into your stomach or bowel. It goes right into your blood through the IV tube that we put in a big vein (usually in your chest).

The benefits of PN include:

- ☑ You can get the nutrients you need over a long time. It has been used successfully in the hospital and at home for many years.
- ☑ With home PN, you can leave the hospital and be active in your community.

Your doctor and nurse feel you will benefit from PN. They are sure you and your family are able to learn and do the steps for PN at home.

The Learning Program

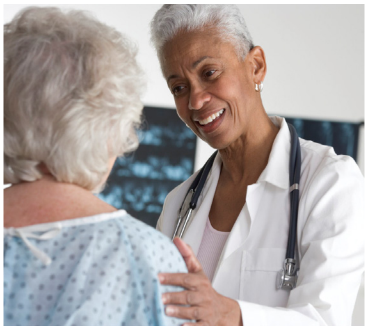
Read this part to learn:

- how you will learn to do PN at home
- who else needs to learn
- when you can go home
- about your PN team

How will I learn to do PN at home?

We want to make sure you understand and are able to take care of yourself and your PN. To do this we:

- make a teaching plan that suits your needs and the way you like to learn
- provide one-on-one lessons with the PN nurse
- make sure you actively take part as you learn
- are with you when you practice your PN skills on your own before you go home
- provide this book as a guide while you are in the hospital and at home



Who else needs to learn?

Choose a person who can also learn PN skills. This person may be a family member or close friend. This person will be able to help if you have problems. You are responsible for your own care. But, it's important to have another person available for support and help when you need it.

Discharge and Follow up

Read this part to learn:

- when you can go home
- home and community care
- your PN supplier
- about your PN team

When can I go home?

The plan for when you go home (discharge from hospital) begins when you start the learning program and continues until you are at home. You and your PN team plan your discharge. To make sure you are ready to go home, you must be able to show that you:

- ☑ understand PN, why you need it and how it will help
- ☑ can do all of the important steps to use PN at home
- ☑ know what to do if you have a problem
- ☑ can cope with your new way of life by your emotions, outlook and attitude

You and the PN nurse will set your discharge date during your learning program. The date you and your nurse choose depends on:

- your progress
- your medical condition
- when the pharmacy can have your formula and supplies ready

When you are ready to go home, a community care coordinator will visit you to talk about what you need at home. The coordinator will arrange for a nurse to come to your home twice a day for a few weeks.

Home and community care

When you are ready to go home, a community care coordinator will visit you. The coordinator will talk to you about what you need at home. They will arrange a nurse to come to your home twice a day for a few weeks. The coordinator can also arrange for other services if you need them. These include:

- homemaking
- physiotherapy
- lab technician (in some areas)
- equipment rental
- anything else that will help you adjust to being home

Ordering your PN supplies

____________________________________ is the company that will provide your PN supplies. Your first batch of PN supplies are ordered and delivered before you go home.

A customer service representative (CSR) will contact you once you have been home for about 2 weeks. They will show you how to order your PN solutions and supplies. The company needs 1 to 2 weeks to make your solutions and test for quality. They will also tell you when you can expect to receive your order. A sample PN supply order form is at the end of this manual.

If you notice you are close to running out of supplies, contact your CSR. They will deliver what you need as soon as possible.

Remember: You must keep your solutions in a separate refrigerator to keep them free from germs. We will provide you with this refrigerator. A PN nurse arranges to have it delivered to your home before you leave the hospital.

How do I throw away my supplies safely?

Home health care waste is not allowed in your recycling bin. Items such as the PN or IV bags and tubing, catheters, dirty dressings, sponges and gauze must be double-bagged and placed inside your garbage bin.

Remember: needles, syringes, medicine in vials or ampoules and other sharp objects must be placed in the **sharps container**.

Your PN team

As a home PN patient, you have a PN team. You meet your team while you are in hospital. Your team includes a:

- doctor
- dietitian
- nurse
- pharmacist

We are here to support and help you if you have any problems or emergencies. We encourage you to talk about your concerns, fears and feelings about being on PN.

How to reach us

Dr. J. Allard	416 340 5159
Ka-Wai Chin, Clinical nurse coordinator	416 340 4018
Celeste Arca-Juico, Clinical nurse coordinator	416 340 4800 ext. 3386
Ann MacGillivray, PN dietitian	416 340 4800 ext. 8578
Ian Pang, PN pharmacist	416 340 5306

The Central Venous Catheter (CVC)

Read this part to learn:

- what a CVC is
- the different ways a CVC is put into your body

What is a CVC?

A central venous catheter (CVC) is a thin, hollow, flexible tube. It is specially designed to be in place for a long time. This tube brings the PN solution to your blood.

Your surgeon or radiologist puts this catheter in so you can safely receive the PN at home instead of in the hospital.

About your CVC:

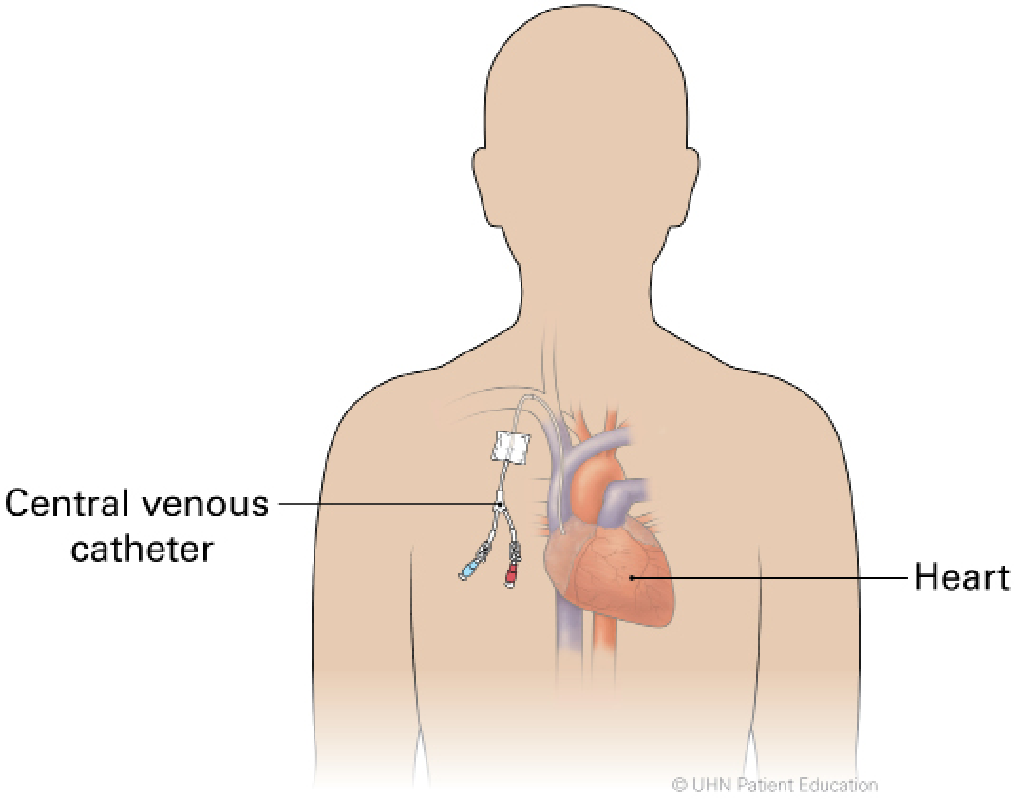
- The catheter tip rests in a large vein just outside your heart, called the superior vena cava.
- Catheter designs come in single or double lumen (it is also available in triple lumen design). A lumen is the open space inside the catheter.
- There is a cap at the end of the catheter where your PN tubing is attached.
- The catheter will need to be flushed after your PN is given to prevent clogging.
- The adapter cap and dressing are changed regularly.

There are different ways your CVC is put into your body:

Tunneled CVC or Hickman

A tunneled CVC has part of the catheter placed (or tunneled) under your skin. It is also known as a Hickman catheter. It can stay in your body for a long time. Here are some facts about the Hickman:

- It has a cuff that holds the catheter to the tissue under your skin. The cuff helps keep the Hickman in place and helps prevent infection.
- Tunneling makes the area where the Hickman comes out separate from where it goes in. This reduces the chance of infection.
- They are very strong and can last for years with good care.
- They have a screw adapter on one end that hooks up to your PN tubing.
- They come in different sizes and number of lumens or ports. The number of ports will depend on your needs.



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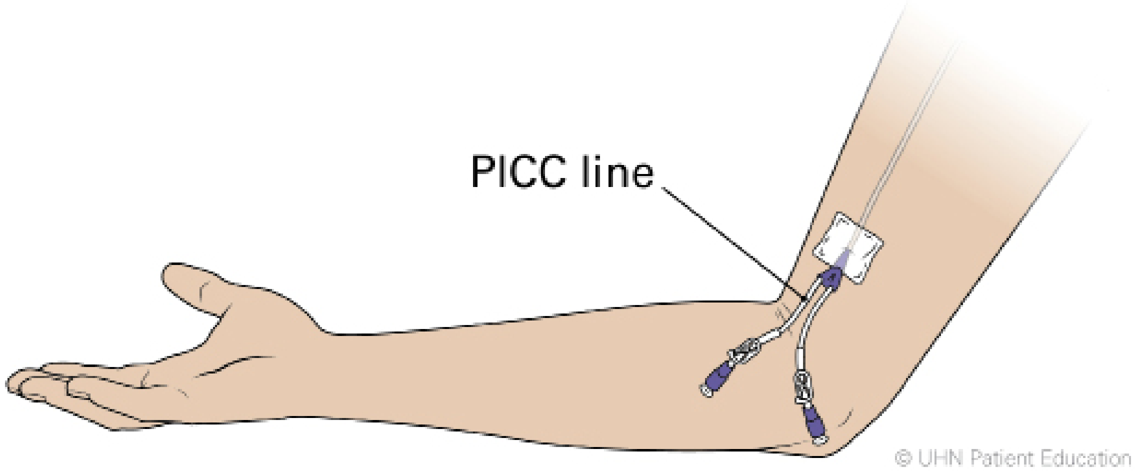
Peripherally Inserted Central Catheter (PICC)

The PICC is another type of CVC. Here are some facts about the PICC:

- It is put in an arm vein and leads up into a large vein in the chest.
- The outside part of a PICC is near or above the bend in your arm.
- At the end of the catheter is a cap. This is where your PN is connected.
- A PICC catheter is made of a soft flexible material that should feel comfortable when you move and allow you to use your arm normally.
- It comes in different sizes and number of lumens or ports.
  The number of ports will depend on your needs.
- A PICC is placed in the x-ray department.



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With proper care, your PICC can last several weeks, months or even years. A PN nurse will teach you and your caregiver how to care for your PICC while you are in the hospital. We will also make plans for a home care nurse to teach you when you are at home.

Implanted port or Port-a-Cath

An implanted port or Port-a-Cath is another type of CVC. It is placed under your skin, usually in the upper chest, just below your collarbone. Here are some facts about a Port-a-Cath:

- There are two parts:

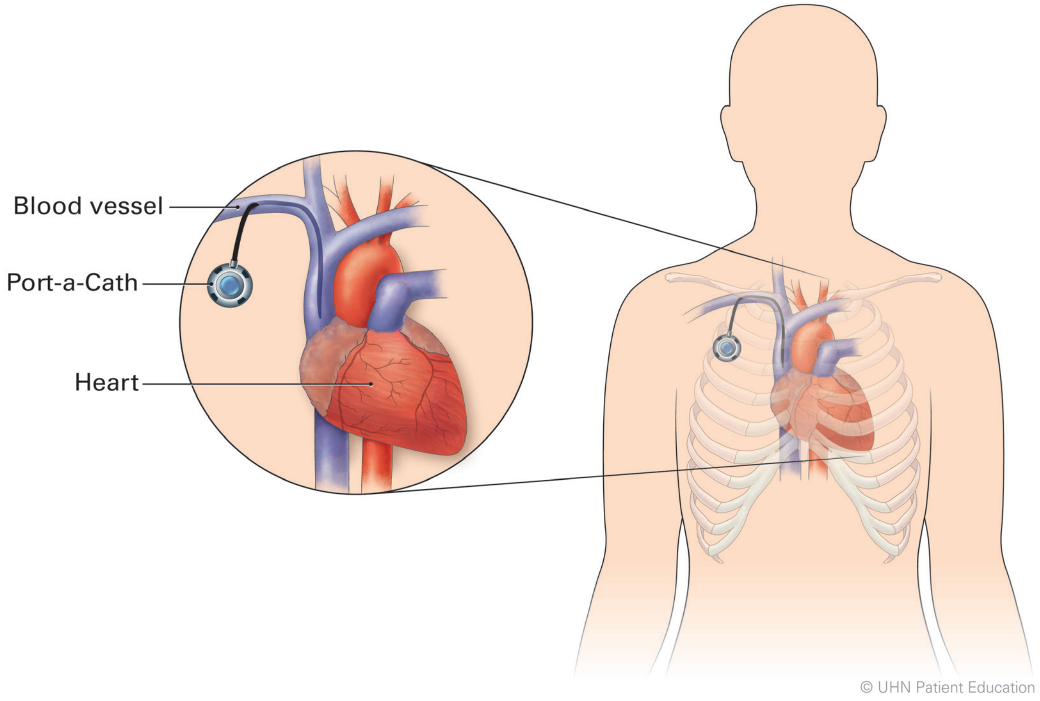
  1. **The septum or portal**
     It is made of silicone material (like rubber) and shows as a round bump under your skin. This is where a special needle is put in before the catheter is used.

  2. **The catheter**
     It is attached to the septum. The catheter goes into a large vein leading to your heart.

- The septum or portal is made of strong silicone and so it can be poked with a needle hundreds of times without weakening.

- The risk of infection is low with a Port-a-Cath. After it is put in and you heal, the only opening in your body is the small hole made by the needle used to give you PN.

- Since it is completely inside your body, swimming and bathing are not a problem.



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Staying Safe from Infection

Read this part to learn:

- why there is a risk of infection with PN
- what to do to prevent infections

What do I need to know about infections and PN?

Infection happens when harmful bacteria (germs) grow in your body. There is a risk of infection with PN because:

- Your catheter will stay in your body for a long time. You could get an infection if germs get into your catheter.
- The PN solution may support the growth of germs because it contains sugar and other nutrition-rich contents.
- If you have a fistula, ileostomy, colostomy, or gastrostomy tube, it’s possible for germs to travel to your catheter.

With PN, it is very important to follow rules that will prevent you from getting an infection. Another name for following these rules is called using **aseptic technique**.

It’s very important to use aseptic technique to prevent infections.

Follow these rules for aseptic technique:

1. Work in an area that is clean, quiet, and free of dust. Use a space that doesn’t have other activities going on. This reduces the risk of germs that are moving in the air from landing on your sterile (clean) equipment.
2. Clean your counter top or working surface very well with alcohol or disinfectant to get rid of any germs.
3. Wear a mask if you have a cold. The mask traps germs that come out of your mouth when you sneeze or cough. Only wear a mask once and then throw it away. Use a new mask the next time you give yourself PN.
4. Wash your hands very well before you handle or do care on any part of your PN system. The next section has important instructions for how to wash your hands properly.
5. Remember to clean from your fingertips to your elbows. Use fast scrubbing and rubbing action (also called friction) when you clean. This will help remove germs from your hands.
6. Hold the sterile equipment above your waist. This keeps your equipment in your sight so it doesn’t get dirty.

Remember: Anything that is free of germs will get dirty if it touches something else that is dirty.

7. Don’t talk, cough, sneeze or reach over a germ-free area or object. This will keep your equipment from getting dirty from germs that may come from your nose, mouth or arms.

8. Cover any germ-free needles that you are not going to use right away, so they stay clean.

9. Rub the tops of all vials very well with a chlorhexidine swab before you put in the needle. This takes away any germs and keeps your equipment from getting dirty.

10. Rub the connections on all tubing very well with a chlorhexidine swab before you disconnect the tubing. This reduces the amount of germs on the outside of the connections and the risk of germs going inside the tubing.

Handwashing

Read this part to learn:

- why handwashing is important
- step by step instructions for handwashing before any aseptic procedure

Why is it important to wash my hands?

Handwashing is the most important thing that you can do to prevent infection. If your hands are dirty with germs and bacteria, they will make anything you touch dirty.

Handwashing is very important before any aseptic procedure. An aseptic procedure is anything that has to do with giving yourself PN or CVC care.

To remove most of the germs and dirt from your hands, you need to wash your hands for 2 minutes under warm running water using an anti-bacterial skin cleanser and fast scrubbing action.

Important things to remember:

- Use chlorhexidine 2% antibacterial skin cleanser because it's a detergent and a disinfectant (kills germs).
- Lather lifts dirt and germs. Rub your hands together quickly to work up lather.
- Use warm, running water. This improves how well the chlorhexidine works.
- Quickly and firmly rub your hands on your skin to clean each finger, palm, wrist and forearm. This helps to get rid of germs.

- Remove all your jewellery. If you can't remove your rings, move them up and down as you wash your fingers. Germs like to live in the dark, moist area underneath your rings.
- Clean under your fingernails with a clean nail file. Don't use a nail brush because it may injure your skin and cause an infection.
- Repeated handwashing removes more germs.
- After you have completed your aseptic procedure, wash your hands again. Then put lotion on your skin to prevent dryness and cracking.

Follow these step by step instructions for handwashing to prepare for an aseptic procedure.

Gather these supplies:

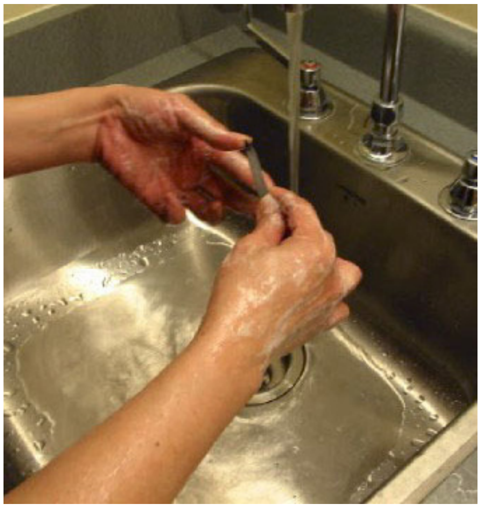
- ☑ chlorhexidine 2% antibacterial skin cleanser
- ☑ clean nail file
- ☑ paper towel

Follow these steps:

1. Turn on the water. Use warm water, and leave the water running during all the steps.

2. Wet your hands and forearms under the running water. Put some chlorhexidine soap in your hands (2 pumps are usually enough). Rub the soap onto your hands.

3. Clean your nails with the nail file.



4. Continue to scrub your hands with soap. Rub quickly, making circles with your hands. Clean each finger, the palms of your hands, the back of your hands, your wrists, and then up to your elbows.

❗ **Never go back to an area you have just washed.**

5. Rinse the soap from your fingertips to your forearms, always keeping your hands pointing up.

6. Put more chlorhexidine 2% soap in your hands and repeat steps 4 and 5.

7. Dry your hands with a paper towel. Start with your hands and then move up towards your elbow. Dry one arm at a time.

8. Turn the taps off with the used paper towel.

Your PN Solution

Read this part to learn:

- what is in your solution
- about the PN bag
- the equipment you will need
- when to mix in the additives
- how long it takes to give yourself PN

What is in my PN solution?

Your PN solution is made up of many different parts to provide your body with what it needs. These include:

- **Fat**
  Fat is also called fat emulsion or lipids. It provides essential fatty acids that help you stay healthy. It also provides calories for energy.

- **Protein**
  Protein is also sometimes called amino acids. It provides heat and energy for your body. You need protein to help you grow, build new tissue, and repair injured tissue.

- **Carbohydrates (also called dextrose)**
  Carbohydrates provide your body with energy.

- **Additives (vitamins and medicines that are added to your PN)**
  Additives such as vitamins, heparin and other medicines are not already in your PN solution. You need to add them to your PN bag on the day that you use it because they are only good for 24 hours after they are added to your PN. Additives include:

  Heparin (optional)
  This is a medicine that helps your body absorb the fat in your PN.

  Multi 12™
  This is a multivitamin that gives you vitamins A, B, C, D, E, niacinamide, biotin, and folic acid. You add this to your PN every day. Vitamins are necessary for your body to grow, develop, use energy and stay healthy.

  Vitamin K
  This vitamin helps your blood to clot, which prevents you from bleeding too much when you cut or injure yourself. You add this vitamin to your PN once a week. If you are taking blood thinner medicines like Coumadin®, you will not take vitamin K.

We will give you a calendar that shows your daily and weekly routines. It will include the names and amounts of the additives that you put in your PN.

What do I need to know about the PN bag?

Your PN bag is divided into 2 areas:

- The milky, white solution in the upper area is the fat emulsion part of your PN.
- The clear solution in the bottom chamber holds the protein, carbohydrate, sterile water and minerals.

Port for IV tubing

Port to inject medicine

A stiff plastic rod sits over a rubber strip to separate the 2 areas. **When you use your PN, look at it closely to make sure that the rod and strip are securely in place.** You don't want the 2 solutions mixing together until you are ready to use it.

The PN bag has three "ports" at the bottom. These will look like small pieces of tubing that are part of the bag. One is used to inject medicine into the bag. The other port is used to insert the IV tubing.

Remember:

If the clear solution looks murky or milky in any way, don't use it. The rod and strip may have been damaged during shipping or while in storage.

1. Use another bag.
2. Report the damaged bag to the supplier in the morning.

What equipment will I need for my PN?

☑ A separate refrigerator

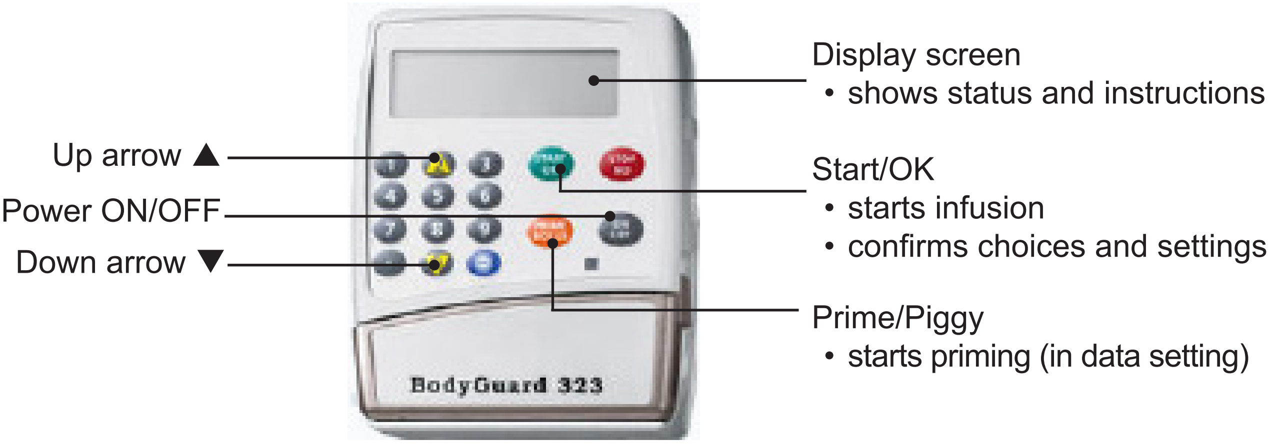
- Keep PN bags in a separate refrigerator. This will decrease the chance of germs getting into your PN. We provide you with this refrigerator.
- An external thermometer will be provided with the refrigerator. Make sure the temperature is always between 2° – 8° degrees Celcius.
- Put your new shipment of PN in the refrigerator as soon as you get it.
- Don't stack more than 3 bags on top of each other.
- Don't remove the plastic rod divider until you are ready to use it.

☑ BodyGuard™ administration set

This set has sterile (clean) tubing that you can throw away after using. It has a filter that helps remove germs and prevent particles and air bubbles from passing through.

☑ BodyGuard™ Infusion Pump

This is an electronic pump that can go in a backpack so it can go where you go. It will safely and accurately infuse your PN.



When do I mix in the additives?

Timing is important when mixing in the additives. Here are some important points to remember:

- The additives are only good for 24 hours once they are added to the PN bag.
- Take your bag out of the refrigerator 8 to 12 hours before you connect it. This gives the PN solution plenty of time to warm up to room temperature.
- Warming your solution is important because the PN solution has less air bubbles in it when it's at room temperature. The cooler the bag, the more air bubbles there are. This means that more air bubbles will go through the tubing.
- Don't try to warm it more quickly by putting your PN solution into direct sunlight or in the microwave. This breaks down the protein in your solution.
- You mix in the additives just before you are ready to give yourself the PN solution (see page 24).

How long will it take to give myself PN?

In the hospital your PN solutions are infused over 24 hours through your CVC. Infusing means the PN is slowly added to your blood over time. During this time, we do blood work to see how your body responds to the solutions. We adjust your PN whenever necessary.

PN has a lot of dextrose (a type of sugar). When you go home, we do not want you to have a high blood sugar reaction. To prevent this from happening, we slowly decrease the amount of time it takes to infuse your PN. Doing this gradually lets your body to get used to the high sugar going in over a shorter time.

Eventually, you will be on PN for only 12 hours a day. This is called **cyclic PN**.

At home, you will give yourself PN for 12 hours overnight. In the morning, you will disconnect the PN. This gives you the freedom to go to work, school, shop or do anything you want.

Sometimes, you might need to start your PN earlier or later than usual. If you do, remember not to change the infusion rate and the time it takes to infuse the PN.

⚠ **Do not try to speed up your PN. This can be dangerous because of high blood sugar reaction and fluid overload.**

Infusing Your PN Solution

Read this part to learn how to:

- prepare the solution
- prime the PN tubing
- set up the PN infusion pump
- connect the PN to your CVC
- manage any problems that may happen

Preparing the PN solution

Gather these supplies:

☑ PN bag

☑ syringes: 3 millilitre, 5 millilitre, 10 millilitre (follow the checklist you received)

☑ three 25 gauge safety needles

☑ PN additives (follow the checklist you received)

☑ chlorhexidine swabs

☑ BodyGuard™ administration set

☑ BodyGuard™ infusion pump

How to draw medicine out of vials

1. Check the label. Make sure you have the right medicine.

2. Check the date on the vial. Do not use medicine that is out of date.

3. Take the cap off the vial.

4. Wipe the rubber top clean with a chlorhexidine swab.

5. **Get the syringe ready**
6. Hold the syringe in your hand like a pencil, with the needle pointed up.
7. With the cap still on, pull back the plunger to the line on your syringe for your dose. This fills the syringe with air.
8. Insert the needle into the rubber top. Do not touch or bend the needle.
9. Push the air into the vial to keep a vacuum from forming.
10. If you put in too little air, you will find it hard to draw out the medicine. If you put in too much air, the medicine may be forced out of the syringe.

11. With the vial right side up, put the needle straight in.
12. Turn the vial upside down and hold it up in the air. Keep the needle tip in the medicine.
13. Pull back the plunger to the line on your syringe for your dose.

    For example, if you need 1 cc of medicine, pull the plunger to the line marked 1 cc on the syringe. Important: some bottles of medicine may say mL.

1 cc of medicine is the same amount as 1 mL of medicine.

14. Remove the syringe from the vial and keep the needle clean.
15. If you put the syringe down, put the cover back on the needle.

To remove air bubbles from the syringe:

1. Keep the syringe tip in the medicine.
2. Tap the syringe with your finger to move air bubbles to the top. Then push gently on the plunger to push the air bubbles back into the vial.
3. If you have a lot of bubbles, push the plunger to push all the medicine back into the vial. Draw medicine out again slowly and tap air bubbles out. Double-check that you still have the right amount of medicine drawn up.

Follow these steps:

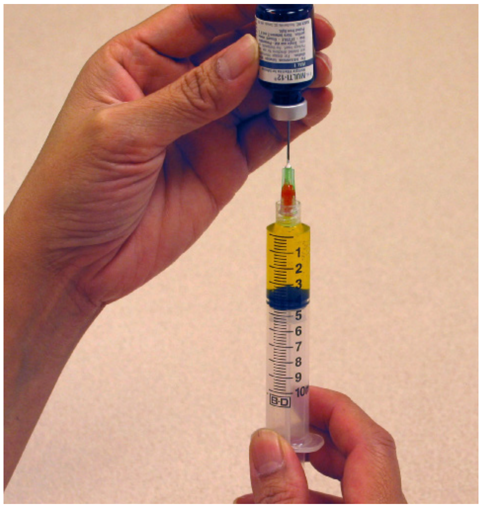
1. Clean your work area very well to get rid of any germs.

2. Wash your hands well.

3. Remove your PN solution from the dark plastic bag.

4. Gather your supplies.

5. Use the needles to draw up all the additives you need (see “How to draw medicines out of vials” on page 30).



6. Change all the long needles on the syringes to 25 short gauge safety needles.

7. Clean the medicine port with a chlorhexidine swab.

8. Remove the needle cover from the syringe. Put the needle into the medicine port. Push on the plunger of the syringe to inject the medicine into the PN bag.

9. Take the needle out of the port. Throw the used needle into the sharps container.

10. Repeat steps 7 to 9 until you have put all the additives into the PN bag.

Finish preparing the PN solution in the evening just before going to bed.

Follow these steps:

11. Wash your hands well.

12. On the PN bag, firmly hold the longer end of rubber strip. Peel it away from the stiff plastic rod. The 2 areas of the bag will combine to become 1 bag.

13. Gently shake the bag. The solution should look completely white with only a slight yellow colour because you added the vitamins. If your solution has streaks or oily layers, do not use the bag. Prepare a new bag.

    Call the supplier in the morning to report.

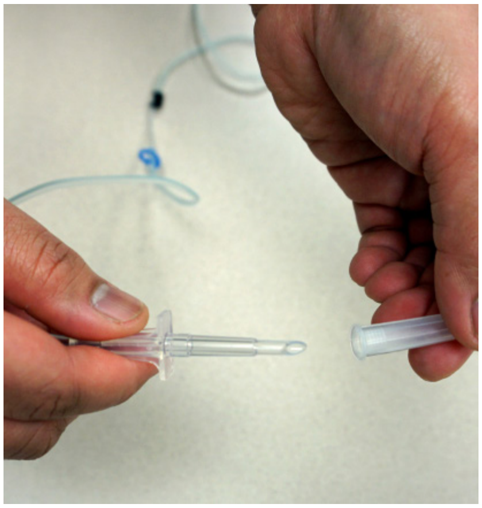
Priming the PN tubing (part 1)

Follow these steps:

1. Remove the tubing from its package. Save the package, you will need it later.

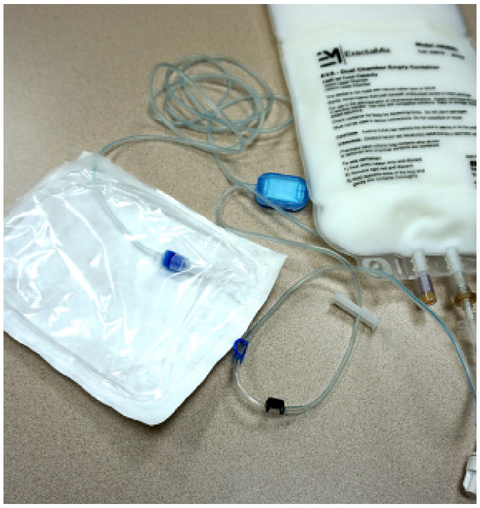
2. Twist off the port cover from the PN bag. (Don't worry. The fluid will stay in the bag!) Do not let the tip of this port touch anything.

3. Remove the plastic cap that is on the end of the tubing. This exposes a plastic "spike." Do not let the "spike" touch anything once you have removed the cap. It should stay sterile, as it will go into the IV bag.

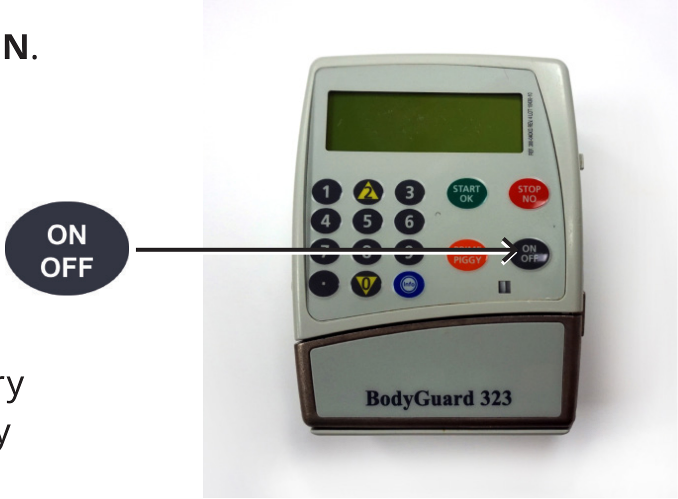


4. While holding the port on your IV bag with your non-dominant hand, insert the spike into the port. It will take some pressure, and you should continue to insert it until it will go no further. Once the tube is in, the PN fluid will start flowing until it reaches the filter.

5. Place the end of the tubing in the package as fluid will start to flow during ‘priming’.



6. Turn on the pump by pressing **ON**.



The **self-test** screen appears very briefly and you will hear a steady sound for a few seconds.

Then the **continuous** screen shows very briefly:

CONTINUOUS
Program
Press No to change

Then this screen will show:

Warning: Do not press “NO for Concentration”

ml/hr
Press OK to Continue
NO for Concentration

If you accidentally press NO, press Stop twice to return to previous screen.

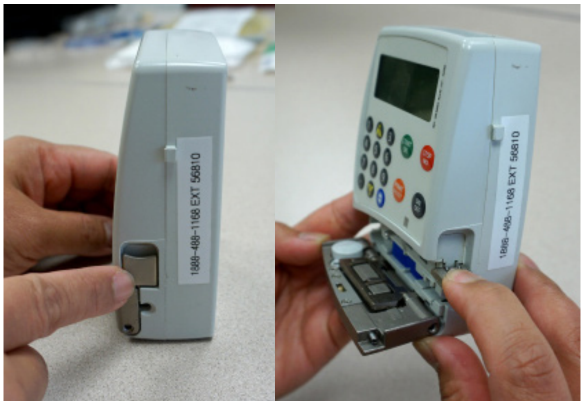
Make sure the set is not connected to the patient until the tubing is completely primed.

Priming the PN tubing (part 2 with the pump)

1. While pump is still on, the display screen shows:

ml/hr
Press OK to Continue
NO for Concentration

2. **Do not touch any button.** Find the door latch on the right side of the pump. Pull the latch down and open the door.



3. Find the blue ring and black plastic key on the tubing.

4. Place the tubing across the slot going from left to right (follow the arrow). The flow of infusion goes from left to right.

5. Close the pump door.

6. Press orange Prime/Piggy button.

PRIME
PIGGY

7. The screen shows:

PRIME
Disconnect Patient
Press OK to Start

8. Push Start/OK button. START OK

9. The screen shows:

Prime Vol 10 ml
Press OK to Continue

10. Push Start/OK button. START OK

11. The fluid will start running through the tubing. The display screen shows a graph with the priming operation. It will stop automatically.

12. Once the priming is finished, the screen shows:

ml/hr
Press OK to Continue
NO for Concentration

13. If more priming is needed, repeat these steps again.

⚠ **Warning: Make sure that all air is removed from the tubing before connecting to the patient.**

Connecting the PN to your CVC

1. Gather your chlorhexidine swab and pre-filled (10 ml) normal saline syringe.
2. Clean your CVC with alcohol swab (see page 38, steps 8, 9 and 10).
3. Attach the saline syringe directly on to the CVC cap. Open the clamp.
4. Flush your CVC with saline using push/pause technique. Remove the syringe.
5. Clean your CVC with alcohol swab again.
6. Remove the cover of the PN tubing.
7. Attach the PN tubing to the end-cap. Make sure it is secure.
8. Proceed to program the pump.

Programming the pump

What the screen shows:	**What to do:**
1. ml/hr Press OK to Continue NO for Concentration	Press the Start/OK button. START OK
2. Rate ______ ml Press OK to Continue	Enter the rate for the first time and press the Start/OK button. START OK If you are not entering the rate for the first time, just press OK. **Important:** The pump will remember the rate. You do not need to re-enter the rate every time. If the rate needs to be changed, the PN team will call you at home.

What the screen shows:	**What to do:**
3. Volume ______ ml Press OK to Continue	Enter the volume and press the Start/OK button. START OK You need to re-enter the volume every night. As the PN is infused overnight, the amount of PN liquid will deplete.
4. Rate ______ ml/hr Volume ______ ml/hr Air Sensor 2 ml Press OK to Start	Confirm the numbers are correct and press the Start/OK button. START OK
5. Start Infusion?	Quickly check that the tubing and catheter connection is secure. If it's closed, open all the clamps. Then press the Start/OK button. START OK
6. Rate ______ ml/hr	To ensure the liquid is flowing and the pump is working, check that the "drip" is moving and the green light is flashing.
7. Lock the program by pushing the Info button. Keep pressing for few seconds until the display graph is complete. Info	

8. Place the pump and PN bag in the back pack as shown.

When your infusion is complete:

1. The pump will show **End Program**.

End Program

2. Turn off the pump by pressing Stop button, STOP NO and then push and hold down the On/Off button. ON OFF
3. Prepare to disconnect from the PN infusion.

Pump Alarms

What the screen shows:	**What to do:**
Air / Up Occlusion Press STOP to Mute This alarm means one of the following: • The infusion bag is empty • There is a large air bubble in the line • There is a blockage between the bag and pump	1. Press to Stop button STOP NO to silence the alarm. 2. Check to see if the administration set (tubing) is blocked. If so, fix the blockage and press the OK button. START OK 3. If there is a large amount of air in the line, press the Prime button PRIME PIGGY and then press the OK button. START OK 4. Once it is finished, press the OK button START OK again to continue the program.
Down Occlusion Check Line Press STOP to Mute This alarm means there is a blockage between the pump and your catheter.	1. Press to Stop button STOP NO to silence the alarm. 2. Check to see if the line is blocked. If so, fix the blockage and press the OK button START OK to continue the program.

Heparin Lock (capping off)

Read this part to learn:

- what Heparin lock or ‘capping off’ is, and why it is important to do it
- the supplies you will need
- how to cap off

What is Heparin lock?

When you are home, it usually takes 12 hours for you to infuse your PN. You can use the rest of the day to do other activities.

To prevent your catheter from becoming blocked (clotting) when you are not infusing your PN, you need to inject Heparin into your catheter. **This is called Heparin lock or capping off.**

Remember: Even if you do not have PN every day, follow your heparin lock schedule. This will prevent problems when you do infuse your PN. Your PN nurse will explain to you how often you need to do it.

What supplies do I need?

☑ **Hepalean-Lok™ (100 U.S.P. units per millilitre) pre-filled syringe, 3 or 5 millilitres**
You use Heparin because it is an anti-coagulant. This means it prevents blood from clotting in your catheter until you have your next infusion.

☑ **Sodium chloride (normal saline) pre-filled syringe, 10 millilitres**
This solution clears your catheter after you have infused your PN or medicines.

☑ **Adapter cap or end cap**
This cap covers the opening (also called hub) of your catheter. You will change the cap every week or whenever is necessary.

☑ **Chlorhexidine swabs**
You can use chlorhexidine swabs to clean things such as the adapter or end cap. You also use them to wipe the places where the tubes connect before disconnecting them.

To cap off, follow these steps:

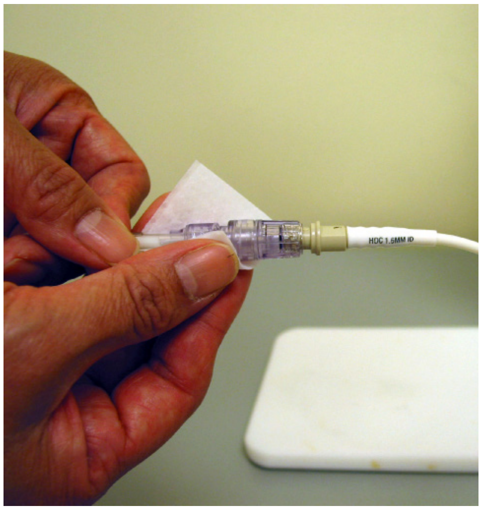
1. Clean your work area very well to get rid of any germs.

2. Gather your supplies.

3. Wash your hands well using chlorhexidine antiseptic solution.

4. Turn off the infusion pump, and clamp your catheter.

5. Use a chlorhexidine swab to wipe the connection between the adapter cap and tubing. Make sure you wipe it very well.



6. Disconnect the tubing from the adapter cap.

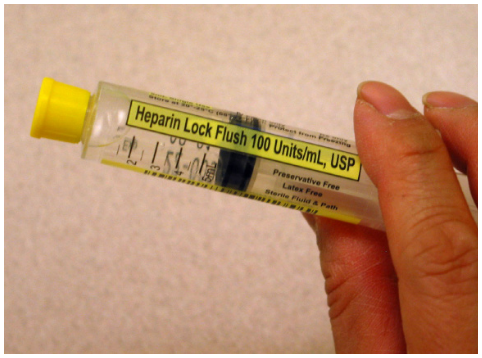
7. Use a chlorhexidine swab to wipe the adapter. Wipe it very well.

8. Attach the sodium chloride pre-filled syringe to the adapter cap. Open the clamp on your catheter.

9. Inject the sodium chloride solution slowly. Use the **push-pause** technique.

10. Remove the syringe from the adapter cap.

11. Repeat Steps 7 to 10 with the Hepalean-lock™ pre-filled syringe.



Changing the adapter or end cap

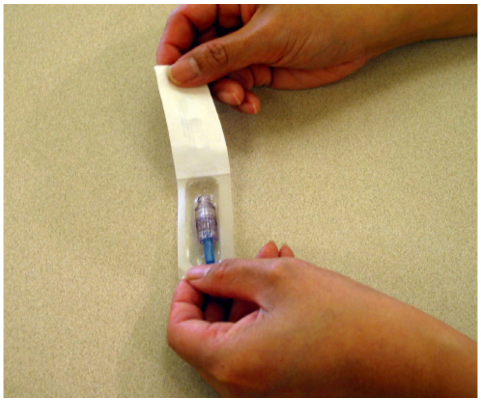
If you need to change your adapter cap, change it when you cap off after your infusion.

Gather these supplies:

- ☑ a new adapter cap
- ☑ chlorhexidine swabs

Follow these steps:

1. Open the adapter cap package.



2. Use the chlorhexidine swab to wipe the top of the adapter where the syringe will be attached.

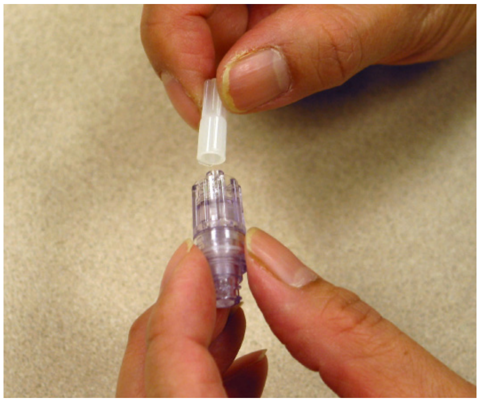
3. Attach a sodium chloride pre-filled syringe.

4. Flush the adapter cap with a little bit of sodium chloride, just enough to fill the space. Set the cap aside.

5. It is important to make sure your catheter clamp is closed.

6. Wipe the connection between your catheter and the adapter cap with a chlorhexidine swab. Remove the adapter cap from your catheter.

7. Take the protective cap off the new adapter. Attach the new adapter to your catheter with the sodium chloride syringe.



8. Unclamp your catheter.

9. Flush your catheter with the rest of the sodium chloride. Use the push-pause technique.

10. Flush your catheter with Heparin. Use the push-pause technique as in step 9.

11. Clamp your catheter.

Remember: Do not clamp your catheter while you are flushing. Clamp your catheter after you remove the last syringe.

Changing Your CVC Dressing

Read this part to learn:

- why it’s important to change your CVC dressing
- what to look out for when you are changing your dressing
- the supplies you need
- how to change your dressing

Why is it important to change my CVC dressing?

Keeping the skin around the area where the catheter leaves your skin clean is one of the best ways to prevent infection. This area is called the exit site. You need to carefully clean and dress the exit site to stop germs (bacteria) from growing and causing an infection.

- You need to change your dressing every week and whenever it is loose, dirty or damp.
- Look out for signs of infection, such as redness, pus (yellowish fluid), swelling or increased pain. If you have signs of infection, you need to change your dressing every day, especially if there is fluid draining from it.
- If your dressing is loose, you must change it as soon as possible. Your dressing may come loose for different reasons, such as:
    - tape catching on your clothes
    - fluid draining from the exit site
    - sweating, especially during warm weather

Remember: You may need to change your dressing more often during the summer.

What should I look out for when I change my catheter dressing?

Fluid draining around your exit site

- If you have redness or fluid around your exit site, call your doctor or PN nurse. They will let you know what to do.
- Take a look at the type (for example, thin or thick), amount and odour of the fluid. A sample of this fluid will be tested for germs.
- Your doctor may prescribe you an antibiotic (a medicine that kills germs) until this problem goes away.
- When you have fluid draining from your exit site, you need to change your dressing every day. Check how your exit site looks each day.

Redness along the catheter tunnel of a Hickman or around the exit site of your PICC or Port-a-Cath

If you see redness in these areas:

- Check for fluid draining from the exit site.
- Check your body’s temperature.
- Call your doctor or PN nurse after you finish doing your dressing change.

Skin irritation

- You may get a skin rash or your skin may become irritated from the dressing or swab sticks when cleaning your exit site.
- If you get a rash, call your PN nurse. She may arrange for you to use a different kind of dressing or different swab sticks.

Your catheter has moved

- If you have a Hickman, a cuff called a “dacron cuff” prevents your catheter from slipping out. The cuff sticks to your tissue under your skin (subcutaneous tissue).
- If you have a PICC, a “stat lock securement device” is used to prevent the catheter from slipping out.
- Do not pull on your catheter for the first 4 to 6 weeks after you get it.
- Check to see if your catheter has moved. Measure and write down how long it is often. Your home care nurse may also often measure how long it is. The length should always be the same as the first time you measured it after it was put in.
- If your catheter is longer or has come out, call your doctor or PN nurse as soon as possible. You will need a chest x-ray to check the position of your catheter.
- After your x-ray, your doctor will tell you if you need to have it replaced.

What supplies do I need to change my dressing?

Gather these supplies:

☑ **Tegaderm™ (or a similar type of dressing)**
This is a see-through dressing that is sticky on 1 side.

☑ **3 chlorhexidine-alcohol swabsticks**
These swabsticks have a special cleanser on them which will remove germs and protect against them.

☑ **Tape**

How do I change my catheter dressing?

1. Clean your work area very well to get rid of any germs.

2. Gather your supplies.

3. Use chlorhexidine skin cleanser to wash your hands.

4. Remove the old dressing. Look for signs of infection at the exit site, for example: redness, swelling, or pus.

   If you notice any of these, finish your dressing change and call your nurse or doctor to report what you found.

5. Wash your hands again.

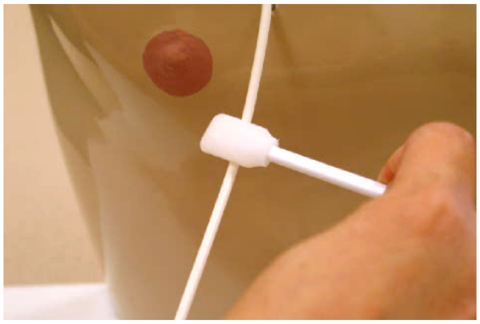
6. Open a package of chlorhexidine-alcohol swabsticks.

   Using one side of the stick, move it in circles on the surface of your skin around your exit site. Keep doing this until you have cleaned a circle around your exit site that is about 4 inches across.

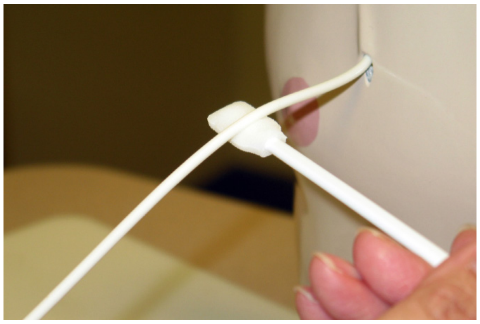
7. Turn the stick over and clean the skin again.

8. Repeat steps 6 and 7 using a new swabstick.

9. Use the 3rd swabstick to clean the top of your catheter down 4 inches from the exit site.



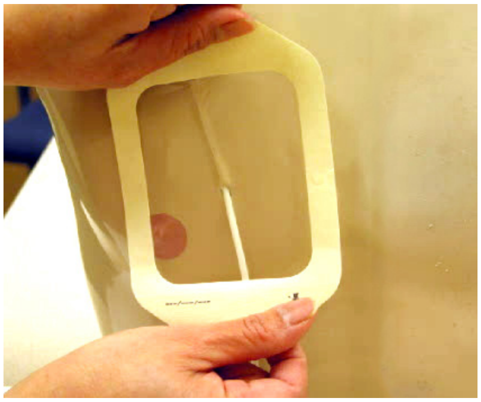
10. Turn the stick over and do the same under your catheter.



11. Let your catheter and skin dry. While your catheter is drying, remove the new dressing from the package. Peel the paper liner off the dressing so the sticky side is exposed.

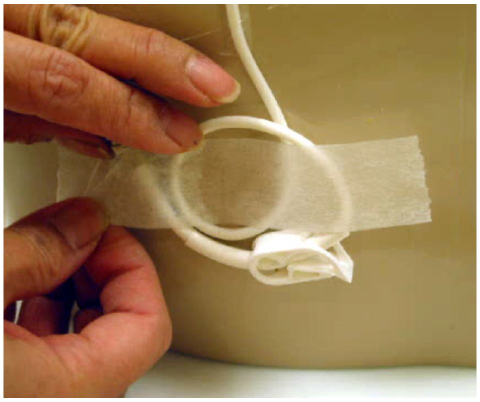
12. Put the sticky side of the clean dressing over your catheter so that the catheter exit site is in the centre.

13. Smooth the dressing from the catheter toward the edges.



14. Loop any extra catheter. Tape the catheter pointing upward in a comfortable place.

    Do not tape the catheter on top of the dressing.



Note: All of these steps show what to do if you have a Hickman line. The PN nurse will explain the difference in steps if you have a PICC or Port-a-Cath. Your home care nurse will also help you and your family with the catheter dressing for as long as you need it.

Possible Problems with Your CVC and PN

Read this part to learn:

- the kinds of problems that can happen with your CVC and home PN
- the signs to look out for
- what to do
- how your health care team will treat the problem

Infection

Infection is the most common problem with home PN. It often happens because you have not followed the aseptic technique. Infections are caused by germs getting in or around a CVC. Infections can become a serious problem if they are not treated quickly.

There are two types of infection:

1. Local infection

A local infection happens in a specific area, such as your bladder, throat, or ear. A local infection can happen in your catheter exit site or tunnel area.

Signs to look for:

- redness
- tenderness
- pus draining from the area (yellowish, smelly liquid)
- swelling at the catheter exit site or along the tunnel area

What to do:

If you have these signs, tell your doctor or PN nurse right away.

2. Systemic Infection

A systemic infection happens when harmful germs get into your blood and make you sick. Systemic infections can happen if a local infection spreads or if germs get into your catheter.

✓ **Signs to look for:**

- fever
- chills
- weakness or a tired, achy feeling

✓ **What to do:**

If you have these signs, go to the nearest hospital emergency department.

> ⚠ **Important:** Go to the nearest emergency department right away if you have signs of systemic infection. If you don't get medical attention, this type of infection can cause your organs to stop working (also called septic shock).

How will my health care team treat my infection?

The team will do tests on samples from your body including:

- blood from your arm (peripheral sample) and blood from your catheter (retrograde sample)
- swabs from your catheter exit site, throat, nose and other areas of your body
- urine (pee)
- sputum (fluid that comes from your lungs when you cough very deeply)

These samples will tell your health care team if you have certain germs causing your infection. If they find harmful germs, the lab will know which antibiotic (medicine that fights germs) should be used.

You will start taking antibiotics right away and stay in the hospital until you get better. You may go home and continue to take antibiotics for a while. Your team may also replace your catheter.

A block in your catheter

Here are a few common reasons why your catheter may become blocked:

- Blood clots in your catheter or in the vein around your catheter can build up and block your catheter. This makes infusing your PN or flushing your catheter harder.
- A block can happen if your catheter is in the wrong place in your blood vessel, bent or pinched, or has broken. This can also happen if your catheter has accidentally come out part of the way or been pushed in too far.
- Your catheter can become blocked if your catheter is not flushed properly and leftovers (also called residue) build up in your catheter. If your medicines interact with one another, this can also cause residue to build up.

Signs to look for:

- It’s hard to infuse your PN or flush your catheter.
- Your nurse cannot draw blood out of your catheter.
- The PN pump alarm shows “occlusion”.

What to do:
Call your doctor or nurse. If you can’t contact them, go to the nearest emergency department.

How will my health care team treat a blocked catheter?

- If you have blood clots, they will give you medicines through your catheter that will help dissolve or break down the clot.
- If your catheter is in the wrong place, they will move it or change it so it works properly again.
- In some cases your catheter may need to be replaced.

The tip of your catheter moves to the wrong place

The tip (the end part) of your catheter may move to the wrong place in your body if you vomit, cough, sneeze, hiccup or move your arm too often.

✓ **Signs to look for:**

- You feel pain, coldness or fullness near your catheter or in your shoulder, jaw, ear or neck area.
- You can hear flushing or feel pain when your catheter is used.

✓ **What to do:**
Call your doctor or nurse. If you can’t contact them, go to the nearest emergency department.

Your catheter moves or slips out

Your catheter may move or slip out if it gets accidentally pulled or stretched and the “cuff” doesn’t hold anymore.

Sign to look for:
The part of your catheter that is outside your body seems longer than usual.

What to do:
Measure your catheter to make sure the length outside your body is not longer than it should be. Compare the length with the measurement you took when your catheter was first put in.

- If it is longer, keep it in place with a dressing or tape.
- Call your doctor or nurse right away. If you can’t contact them, go to the nearest emergency department.

The outside part of your catheter breaks or tears

This is rare, but it can happen. You catheter can break or tear if:

- it comes too close to a sharp object
- it is twisted too much when the caps are changed
- there is too much force during flushing
- it gets caught on something (like clothing) and is pulled or stretched

Sign to look for:
Your dressing is wet because fluid (sometimes blood) leaks out when you infuse or flush your catheter.

What to do:

- Put a clamp above the break, close to your skin (ask your nurse for an extra clamp to use in an emergency).
- Call your doctor or nurse right away. If you can’t contact them, go to the nearest emergency department.

Some catheters can be repaired. Others may need to be replaced.

To keep breaks or tears from happening:

- ☑ Be gentle when you flush your catheter.
- ☑ Don’t use or keep sharp objects, such as scissors, near your catheter.
- ☑ Don’t twist your catheter.
- ☑ Protect the outside part of your catheter so nothing is loose or hanging.

The inside part of your catheter breaks

It is very rare for the inside part of your catheter to break. If it happens, the catheter will need to be removed and replaced.

Signs to look for:

- Your catheter is not working properly.
- You feel your heart is not beating normally.
- You feel short of breath for no reason.

What to do:
Call your doctor or nurse. If you can’t contact them, go to the nearest emergency department.

Air embolism

An air embolism is an air bubble in your blood stream. It is dangerous because if a large amount of air goes into your vein, it can damage your heart, brain or lungs and cause serious side effects.

✓ **Signs to look for:**

- chest pain
- shortness of breath
- coughing

✓ **What to do:**

- Clamp your catheter right away.
- Lie on your left side.
- Call your doctor or have someone call an ambulance right away.

To keep this from happening:

☑ Flush all the air out of your tubing before you use it.

☑ Clamp your catheter whenever it is open, for example, when you are changing your adapter cap. This will help protect air from getting into your catheter.

☑ Your PN pump is designed to detect air bubbles in your tubing. It will stop pumping if there is air in the tubing.

Fluid overload

Fluid overload happens when you get a large amount of your PN or IV solution over a short time. If this happens, your blood may not be able to handle the extra fluid.

Signs to look for:

- a quick gain in your weight
- swollen arms or legs
- shortness of breath

What to do:
Call your doctor or nurse right away.

Not getting enough nutrients over time may cause low serum (blood) protein levels. This can cause swelling in your arms and legs. As your nutrition improves, the swelling will reduce.

Dehydration

Dehydration is when your body does not have enough fluids. This can happen if you do not drink enough fluids or you are losing fluids because:

- you are vomiting or have diarrhea
- ostomy
- you are not drinking enough during hot weather
- you have gastroenteritis (a kind of virus infection) or the flu
- you drink too much alcohol

Signs to look for:

- thirst
- dry mouth
- weakness or dizziness

What to do:

- Call your doctor or nurse right away.
- You need more fluid through your catheter. You can do this at home.

Living with PN

Read this part to learn:

- how your home PN can affect parts of your daily living
- how you and your loved ones can help manage any changes

Meals

Eating is a normal part of everyday life. Mealtimes are often when we gather and socialize with family and friends. When you cannot eat, you may feel like you can no longer use food to gather with others. Before, you may have eaten food when you were bored, angry or frustrated.

Patients miss and crave food. When you first start your PN, you may feel depressed. This usually improves as you and your family learn to cope with this change.

To help manage this change, take part in mealtimes. You can still help with cooking. Many patients sit with their families at mealtimes. They can even begin their infusion at that time.

Bathing

You can bathe or shower as you did before. Do not get your catheter dressing wet. Your PN nurse will show you ways to keep your dressing dry.

Sleep

Since you infuse your PN during the night, you might wake up 2 or 3 times at night to pee. Most patients do not have trouble getting back to sleep. If you do, you may feel tired during the day. Taking a nap can help. Talk to your doctor if you continue to have trouble sleeping.

When you first start PN, you may be worried about your equipment, your catheter and everything working well while you sleep. Over time, you will get used to sleeping with PN. When you get up to pee, check that everything is OK, so you feel more comfortable.

Keeping your mouth clean (oral hygiene)

Make sure you always keep your mouth clean. This prevents harmful germs from building up in your mouth. Germs can cause infections such as canker sores or parotitis (an infection in your saliva glands).

To keep your mouth clean:

- ☑ Brush your teeth 3 to 4 times a day.
- ☑ Use mouthwash and dental floss every day.
- ☑ Exercise and massage your gums every day.
- ☑ See your dentist regularly. If you need dental work, including cleaning, filling, tooth pulling or root canal, take antibiotics before your appointment. Call the PN pharmacist about taking antibiotics before your dentist appointment.

Exercise

Talk to your doctor about whether you can exercise. Most patients on PN can go back to doing their regular exercises, but start slowly increase your activities over time. Every patient is different. You may find you can do more exercise once you start PN, or you may feel you can do less.

Exercise is important to help you build muscle and prevent extra fat in your body. You can do most activities and sports, but do not play contact sports, such as football, baseball or soccer.

Work

Giving yourself PN at home lets you get back to work as soon as you feel ready. When you return to work, you may need to change your PN schedule so it fits with your work schedule.

Your body image and having sex

You received care for a major illness. You may have scars on your body, and you may not like the look of your catheter. This can affect your body image (how you feel about your body). These feelings are normal as you get used to your PN.

If you are single, younger or have spent a large part of your life in hospital or at home, you may worry about feeling alone. Or, you may feel that people won’t accept you with your catheter and PN. These feelings may affect your self-esteem (how you feel about yourself) and your interest in having sex.

Talk to your health care team about your feelings. They can work with you to improve your self-esteem. You can also talk to them about any worries you may have about sex. For example:

- You may be worried that too much moving or certain positions will cause your catheter to come out.
- You may worry that sex must now always be planned.

They will provide helpful suggestions. We encourage you to experiment with sex to find a comfortable position and time for you and your partner.

Entertainment

Stay in touch with what is going on in the world. Start by listening to the radio, watching TV, reading the newspaper or talking on the telephone. When you feel better, stay in touch with your loved ones, friends and people from your work. Doing this will help you adjust to living with PN.

You can change your PN schedule when you want to do something fun. For example, if you want to go out for the evening, you can hook up your PN later that evening.

Travel

When you feel comfortable with home PN, you can plan different types of vacations or travel. It will take some extra time to organize your trip, but it is possible.

- Talk to your doctor about your travel plans, so they can make sure your plan is safe for you.
- Tell your travel agent, airline, or other travel company about your health details. You need to provide your travel agent with a medical letter from the PN doctor. Ask for a letter approving your travel plans.
- Talk to your PN nurse for help with planning what you will need for your PN.
- Tell your supplier about your travel plans about 1 or 2 months before you plan to travel. Your supplier will also help you to prepare.

Mental health and home PN

It can be hard to get used to your home PN. Slowly, you will feel better and learn how to care for your PN.

Every patient’s experience and recovery is different. You will have many different feelings as you learn to manage your PN. You may cope well or you may feel angry or depressed. It is important to talk about these feelings. This will help you work through any problems you are having.

Talk to your health care team about your feelings. They are ready to help and want you to be successful on home PN. Your team uses many resources to help you understand and cope with your feelings, including:

- a patient who has been on PN for a while. You can talk to them about any worries you have and different ideas, suggestions and ways to cope.
- a nurse and doctor. They listen and give advice to help you understand the feelings you have. They also answer your questions and give you support.

Your home PN can affect your family as well. They may be worried or afraid of the changes they need to make. It will take time for them to understand how your home PN affects them.

It is important for you and your family to talk about these worries. Your health care team can help you and your family manage and cope with these changes.

Follow-up Care

Read this part to learn what follow-up care you will need while you are on home PN.

While you are on PN, we do many things to check on your health:

Blood tests

While you are on PN, you will need to have blood tests often. The blood test results help us make sure that you are getting the nutrients you need.

Please make sure your blood test is done before you go to your PN clinic appointment.

PN clinic appointment

The Home PN Clinic is usually on Tuesday afternoons. You will come to an appointment within the first 4 to 6 weeks after you go home from the hospital.

If you live far away, we can plan a clinic visit with you using Telehealth. With Telehealth, you can see and speak to your PN team from another place using a special video technology. This reduces your need to travel to receive care. You go to a place near your home that has this technology. We call this a studio, and these studios are located around Ontario. Often, they are in your local health care centre.

At your appointment, you can talk with your PN team about any concerns or problems you are having. The PN team will also talk to you about your blood test results, medicines, any food you are eating, your central line and your overall health.

After your first appointment, your PN doctor will tell you when you need to come back for another appointment. The time between appointments depends on your needs.

Being re-admitted to the hospital

If you need to be re-admitted to the hospital, please let your PN team know. You must also let the clinicians who are treating you know that you are on home PN. You can give them our contact information if they ask.

Who to Call if You Have Any Questions

Read this part to learn the contact information of your home PN team.

Your team is here to answer your questions and help you with any concerns. We are available Monday to Friday from 8:00 a.m. to 4:00 p.m.

Dr. Johane Allard
Phone: 416 340 5159

Ka-Wai Chin (nurse)
Phone: 416 340 4018

Celeste Arca-Juico (nurse)
Phone: 416 340 4800 extension 3386

Ian Pang (pharmacist)
Phone: 416 340 5306

Ann MacGillivray (dietitian)
Phone: 416 340 4800 extension 8578

Home PN assistant
Phone: 416 340 4800 extension 2850

PN Clinic address:

Toronto General Hospital
Norman Urquhart Wing – 10th Floor
585 University Avenue
Toronto, ON M5G 2N2

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Visit www.uhnpatienteducation.ca for more health information. Contact pfep@uhn.ca to request this brochure in a different format, such as large print or electronic formats.

Form: D-5377 | Author: Home TPN | Revised: 12/2022

ONTARIO MEDICAL SUPPLY
University Health Network

CLIENT NAME: ____

ADDRESS: ____ TEL. NUMBER:______________________

DELIVERY INSTRUCTIONS: ____

DELIVERY DATE: ____

UHN HPN SUPPLIES

Item	Code	QTY
Adapter MaxPlus, clear	UHN 147	
Alcohol pad (200/box)- order # boxes needed	UHN 185	
Arm Guards (shower PICC protector)	UHN 299	
BodyGuard Tubing, 1.2 filter	UHN 177	
BodyGuard Tubing, 0.22 filter	UHN 229	
Chlorhexidine 2% Swabstick with alcohol	UHN 192	
Emergency Tubing with Flow regulator	UHN 242	
Endure® 540 mL hand washing antiseptic	UHN 186	
Heparin Syringe 3mL (1 for flush, 1 for lipid)	UHN 175	
Heparin Syringe 5mL (1 for flush, 1 for lipid)	UHN 176	
Filter Needle (for glass ampoules)	UHN 260	
Needle 25Gx5/8”	UHN 183	
Saline Syringe 10 mL	UHN 202	
Sharps container 7.6L	UHN 145	
StatLock PICC Plus	UHN 189	
Syringe 10 mL 21Gx1 ½” (for Multi-12®)	UHN 194	
Syringe 5 mL 21Gx1 ½” (for Zantac or Pepcid)	UHN 199	
Syringe 3mL 21Gx1 ½” (for Vitamin K)	UHN 196	
Tape, Micropore (paper) 2” x 10 yd	UHN 205	
Tape, Micropore (paper) 1” x10 yd	UHN 204	
Tape, Transpore (plastic) 1” x 10 yd	UHN 206	
Tegaderm transparent dressing 10X12cm	UHN 158	
Wipe Skin Prep Barrier	UHN 207	

To order supplies: CALL 905-614-1224 / 1-888-488-1168 Ext. 36802
or FAX 905-614 -0860 /1-855-728-9552

UHN HPN SUPPLIES (page 2)

Item			Code	QTY	Item			Code	QTY
Burn net (Surgifix # 5)			UHN287		**Sharps Container**, 8 Gallon			UHN146	
Connector Clearlink			UHN136		**Sodium Chloride 0.9%**, 10 mL			UHN187	
Connector MaxPlus, opaque			UHN148		**Sponge**	5x5cm, sterile	1/pk	UHN150	
Dressing	**Opsite IV 3000**	6x8.5cm	UHN156				8-ply, 2/pk	UHN152	
		10x12cm	UHN155			5x5 cm, non-sterile	4-ply, 200/pk	UHN153	
	Primapore 6x8.3cm		UHN157			10x10cm sterile	8-ply, 2/pk	UHN151	
	Tegaderm 6x7cm		UHN159		**Stanhexidine 2% & alcohol 4%**			UHN188	
	Tegaderm IV 8.5x10.5cm		UHN160		**Steri-Strip**, 0.5x4" , 6/PK			UHN190	
Extension Set	**7”** with Max Plus (slide clamp)		UHN162		**Syringe**		10 mL	UHN195	
	14” with Max Plus (slide clamp)		UHN220				3 mL	UHN197	
	8 “ with clear link		UHN255		**Syringe, Insulin**, 1 mL, 25G x 1"			UHN200	
	30” (roller clamp)		UHN164		**Syringe, Saline**, Externally sterile, 10 mL			UHN201	
	Y-Type 7In		UHN168		**Syringe, TB**, 1 mL, 25G x5/8”			UHN203	
Gloves, Vinyl Exam (100/box) Order # boxes needed		Small	UHN171		**Swabstick**	**Chlorhexidine** 2%,alcohol-free		UHN191	
		Medium	UHN170			**Povidone-iodine**		UHN211	
		Large	UHN169		**Towel**, Absorbent, Sterile, 18”x26			UHN149	
Gloves, Sterile (pairs)		6.5	UHN173		**Tubing**	**Basic,** TPN 107” 1.2 Filter		UHN140	
		7	UHN174			**Secondary Med,** Interlink		UHN141	
		7.5	UHN212			**Continuflo,** Interlink, 2 Y, 85”		UHN142	
		8	UHN172			**Continuflo,** Interlink, 3 Y, 105”		UHN143	
Mask, Surgical			UHN179		**Vial Access Cannula**			UHN178	
Needle		21G x 1 ½”	UHN180		**Sodium Chloride** 0.9% 1000mL			UHN 113	
		22G x 1 ½”	UHN181		**2/3 and 1/3** 1000mL (Dextrose 3.3% Sodium Chloride 0.3%)			UHN 105	
		22G x 1"	UHN182						
Needle, non-safety, 21G x 1 ½”			UHN184						