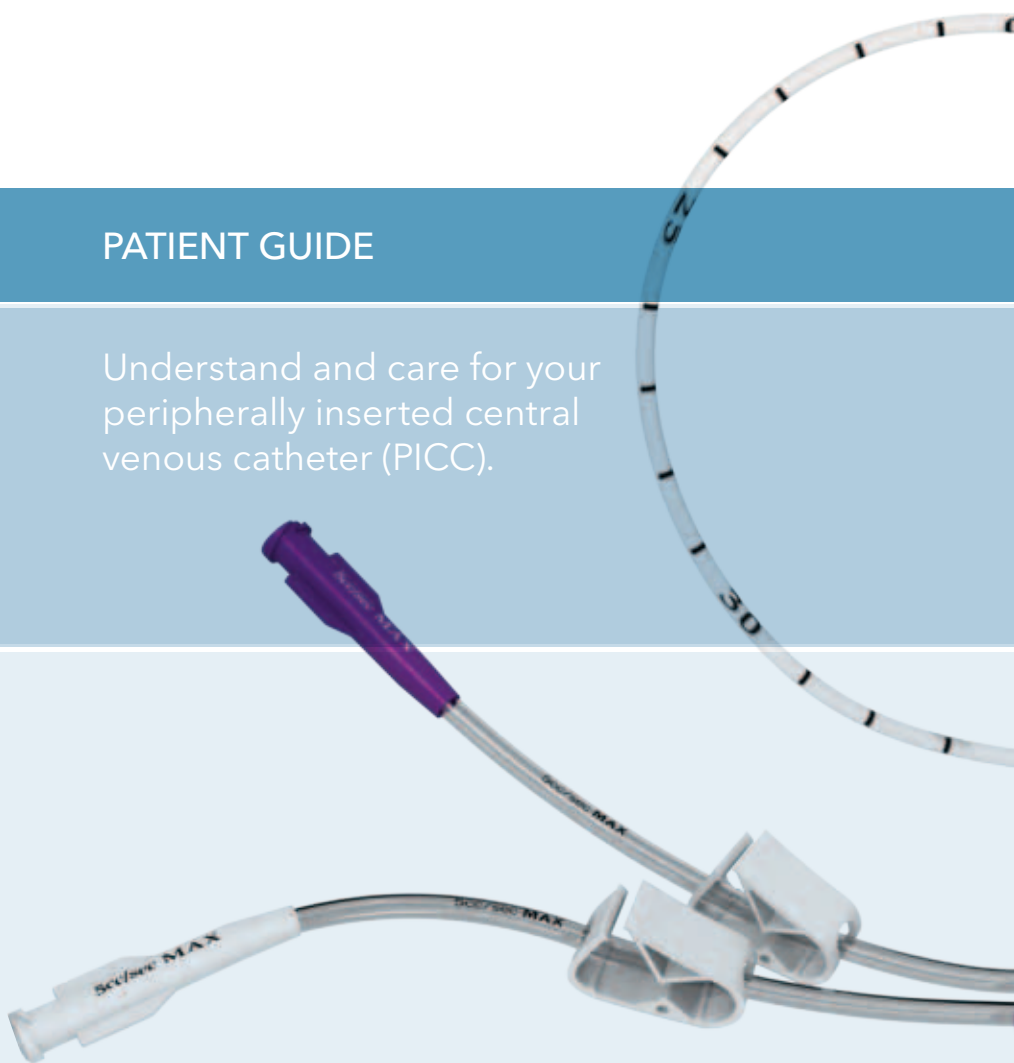


PATIENT GUIDE

Understand and care for your peripherally inserted central venous catheter (PICC).



Introduction

The following information is presented as a guideline for your reference. **The best source of information about your catheter will always be your physician,** and the procedures described in this booklet may be altered by your nurse or doctor to address your individual needs for venous access.

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Suggested instructions

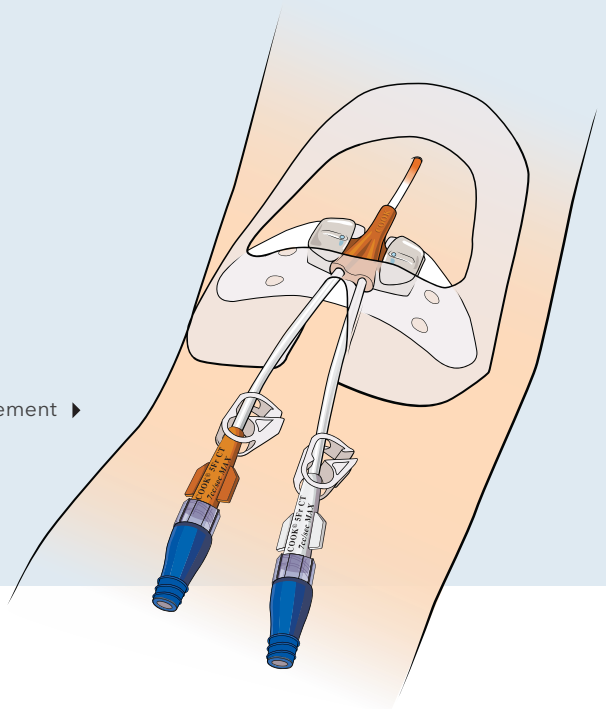
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About your catheter

Your physician has chosen to use a Peripherally Inserted Central Venous Catheter, or PICC, for your intravenous (IV) therapy. A PICC is a central venous catheter that is inserted into a vein in either arm and extends all the way to a location near the heart, where medication infused through the catheter will exit and mix with your blood.

Your intravenous therapy will consist of drugs or fluids delivered directly into your venous system through this catheter. Some IV therapies require multiple infusions over time, and the veins in the hand and arm can be damaged by frequent needle insertions without a catheter. Your PICC is intended to provide a reliable, comfortable and convenient way to receive your therapy.

Upper arm placement ►
illustrated



Your catheter information forms

Fill out the following forms with your nurse or physician at your earliest convenience. Having this information available will help you and your nurse or other caregiver with the care and maintenance of your PICC.

Patient's name:	
Date of placement:	
Inserted by:	
French size:	Vein:
Reference part # (RPN):	
Trimmed catheter length:	Lot #:
<input type="radio"/> Single lumen <input type="radio"/> Double lumen <input type="radio"/> Triple lumen	
Catheter use (check all that apply):	
<input type="radio"/> Antibiotics <input type="radio"/> Chemotherapy <input type="radio"/> Blood sampling	
<input type="radio"/> CVP monitor <input type="radio"/> Blood products <input type="radio"/> Power-injectable	
<input type="radio"/> TPN (nutrition) <input type="radio"/> Other:	
IV nurse's name:	
IV nurse's telephone number:	
Primary physician's name:	
Primary physician's telephone number:	

Your catheter maintenance schedule form

Infusion therapy:

Routine heparin or saline flush and lock:

Routine dressing change:

Needleless injection cap change:

Your dressing should be changed every ____ days, unless it becomes wet or starts to apart. In that case, change it immediately.

Your catheter should be flushed with your physician-recommended solution every ____ days in addition to normal flushing after routine drug injections.

The needleless injection cap should be changed every ____ days, unless the cap becomes damaged or loose. In that case, change it immediately.

General information

Catheter ID card

At the time of your procedure, you will receive a wallet-sized catheter ID card containing important information about your catheter. Be sure that you or your physician record your information on the card as soon as you receive it. Carry your catheter ID card with you at all times.

COOK Catheter ID Card

Routine catheter maintenance is required.
Consult your physician or nurse regarding catheter care and maintenance.

Patient Name: _____

Catheter Use:

<input type="checkbox"/> Antibiotics	<input type="checkbox"/> Chemotherapy	<input type="checkbox"/> Blood Sampling	<input type="checkbox"/> CVP Monitor
<input type="checkbox"/> Medications	<input type="checkbox"/> Blood Products	<input type="checkbox"/> Power Injectable	<input type="checkbox"/> TPN
<input type="checkbox"/> Other: _____			

Cook Medical Incorporated
3122 Ruoff Rd., P.O. Box 4130 • Bloomington, IN 47402-4130
Phone: 800.457.6500

Physician: _____

Physician's Phone: (____) _____

Nurse: _____

Nurse's Phone: (____) _____

Date of Placement: _____

Catheter Lot Number: _____ Length: _____

Reorder Number: _____

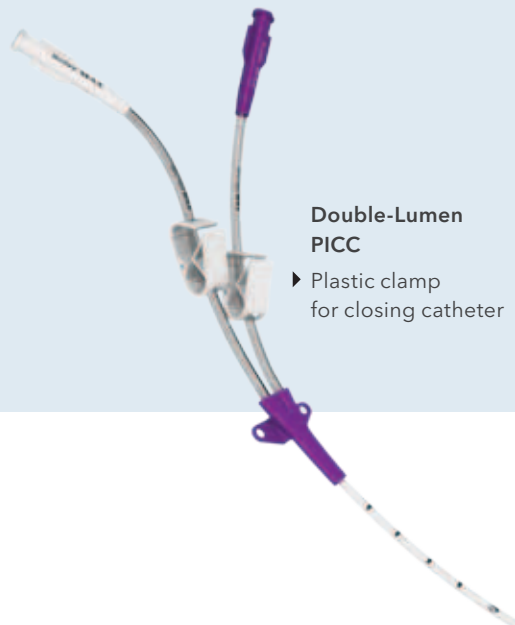
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▶ Patient Catheter ID Card

General information

What is a PICC?

A PICC is a central venous catheter made from a soft, flexible catheter material consisting of either silicone or polyurethane. The catheter is long and narrow and is connected to a wider, reinforced portion of tubing. The catheter has a plastic adapter or hub, a plastic clamp (optional) and a winged portion to help it attach to the skin. A needleless injection cap is attached to the hub end of the catheter. The needleless injection cap allows the infusion of fluids into the catheter and prevents blood from backing up into the catheter. Sometimes a physician will order a double- or triple-lumen catheter. These catheters have two or three separate channels, or lumens. This allows your doctor or nurse to use the lumens for different purposes without mixing infusates, or fluids, during the infusion process.

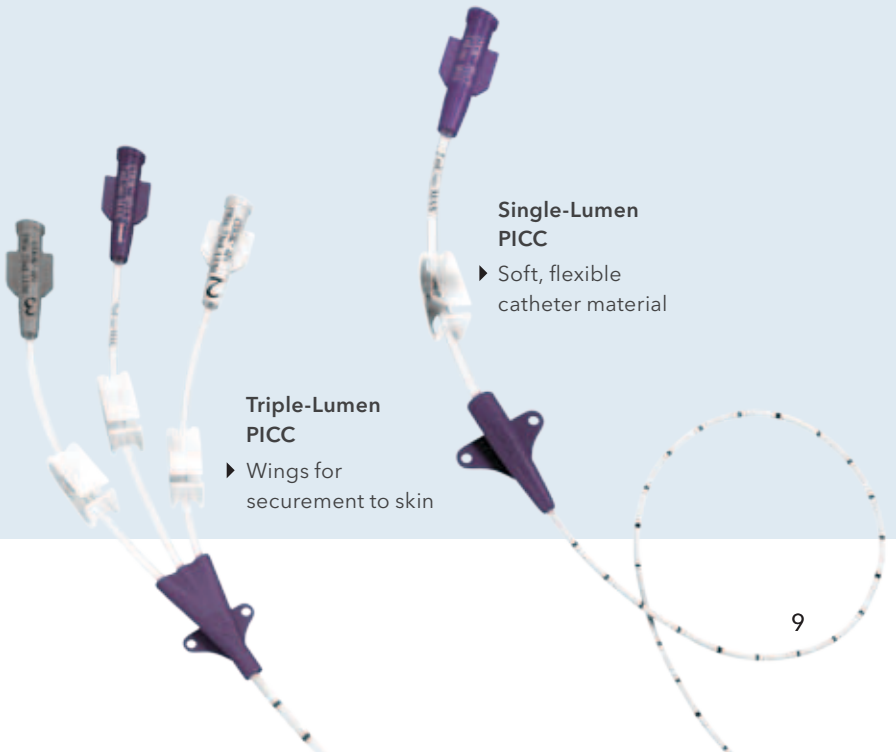


**Double-Lumen
PICC**

- ▶ Plastic clamp for closing catheter

How is a PICC used?

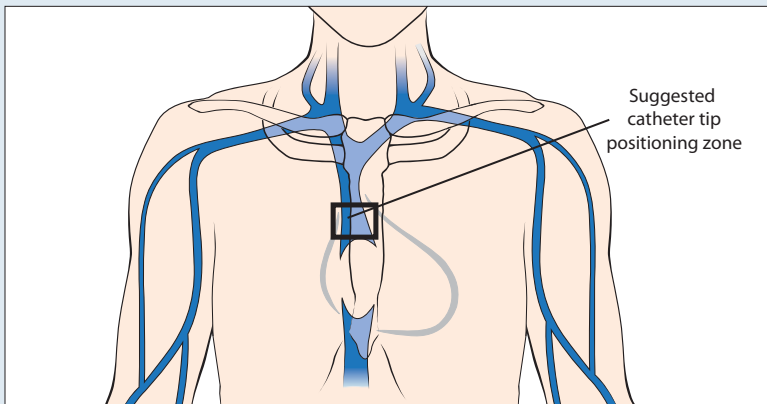
A PICC is designed for the infusion of fluids, including blood products, medications and IV nutrient solutions. It can also be used for blood sampling. A PICC may be left in a vein for several weeks or months, depending on the type of therapy prescribed. Your nurse or physician will discuss this with you at the time your PICC is placed.



General information

How is a PICC inserted?

Placement of a PICC is a minimally invasive procedure that usually occurs in the radiology department, at the patient's bedside or in an operating room. Local anesthetic is used to numb the skin. The PICC is inserted into a vein in the bend of your arm or just above that area. The catheter's tip is positioned in an area of high blood flow near the heart to allow better mixing of your IV medications. Once the PICC is inserted, it is flushed with a physician-recommended flushing solution and capped with a needleless injection cap. This helps prevent the catheter from becoming clogged and is referred to as locking the catheter. If a CLC2000® or MicroCLAVE® needleless injection cap is being used, it can be "locked" with normal saline.



CLC2000 and MicroCLAVE are registered trademarks of ICU Medical, Inc.

An x-ray or other confirmation procedure is performed to verify placement of the PICC. After placement is confirmed, the exposed portion of the catheter is secured to the skin with either sutures or an adhesive patch. A sterile dressing is applied to protect the area where the catheter exits from the skin, or exit site. Once the anesthetic wears off, you may experience some discomfort for a day or two.

General information

Will I be required to take care of the PICC once I leave the hospital?

Depending on your situation and the type of IV therapy you will be receiving, you or a family member may be shown how to care for your PICC.

You may be provided with additional instructions for exit site care, such as:

- Changing a dressing
- Flushing the PICC
- Changing the needleless injection cap
- Recognizing problems and troubleshooting

Note: Be sure to keep an extra clamp for your PICC on hand in case the clamp on your PICC becomes damaged or lost.

Suggested instructions

Exit site care

Your nurse or physician will show you or a family member how to change the dressing. They will make sure you feel comfortable changing the dressing. Depending on your therapy and condition, they will tell you how often your dressing will need to be changed. You may need assistance from your caregiver or a second person for some steps of these procedures.

Your nurse may also provide you with the appropriate supplies you will need for each step in the process of cleaning and changing your dressing, or a list of what will be needed.

In addition to changing the dressing routinely, you should change the dressing promptly if you notice:

- Blood under the dressing
- An air bubble underneath the dressing at the exit site
- Moisture under the dressing
- The dressing is becoming loose

Important: If you experience any pain or redness in your arm, especially at the exit site, notify your nurse or physician.

Suggested instructions

Exit site care

Removing the dressing

1. Find a clean, quiet, well-ventilated place to work.
2. Gather the supplies you will need to clean the exit site and apply a new dressing.

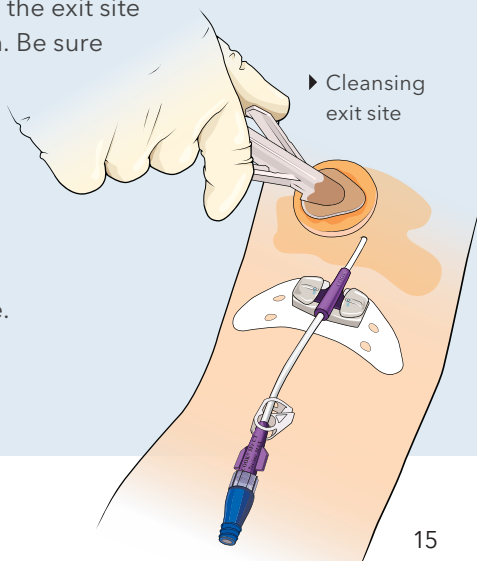
Below is a list of items you may need, depending on your caregiver:

- Sterile gloves
 - Chlorhexidine/alcohol swabs
 - Self-adhesive transparent dressing
 - Bandaging tape
3. Wash your hands thoroughly with an antimicrobial soap for at least two minutes and dry them with a paper towel.
 4. Carefully remove the old dressing, starting low, where the catheter exits the dressing, and working upward. Make sure not to pull on the catheter when removing the tape.
Caution: Never use scissors around the catheter or to remove the dressing. Damage may occur that requires removal of the catheter.

5. Inspect the exit site and the area of your arm around the catheter. Look for redness, swelling, pain to touch, discharge, or loose sutures if your catheter is sutured in place. If you see any of these problems, finish changing the dressing and notify your nurse or physician. Refer to the Troubleshooting section on pages 22 and 23.

Cleansing the exit site

1. Wash your hands again for two minutes.
2. Open the package of gloves. Place a glove on the hand you will be using to clean the exit site. Be careful not to touch anything that is not sterile (skin, clothing, etc.) with your gloved hand. If you accidentally touch something unsterile with your gloved hand, change the glove right away.
3. Pick up the chlorhexidine swab or other suggested skin antiseptic with your gloved hand. Carefully clean the exit site. Continue to clean around the exit site using a back-and-forth motion. Be sure to clean the area underneath the catheter and around the sutures if the catheter is sutured in place. Allow the area to dry. Do not blow on the exit site to aid drying.
4. Remove and discard the glove.



Suggested instructions

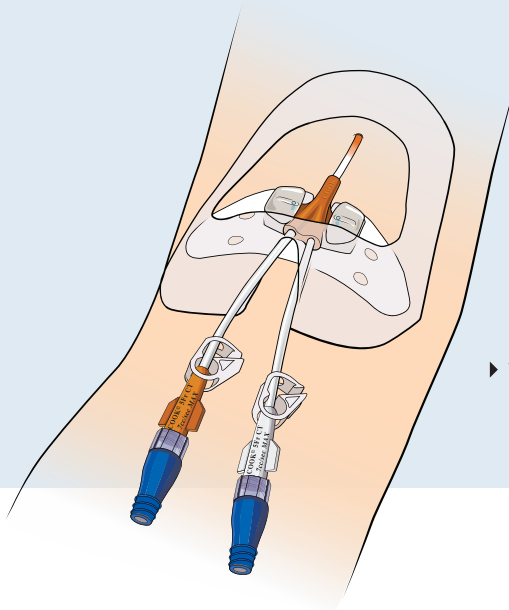
Exit site care

Applying a clean dressing

1. With gloved hands, center the transparent dressing over the exit site and apply as shown on the package.
2. Tear off two strips of bandaging tape. Slide the first strip underneath the catheter and apply to the edge of the transparent dressing. Apply the second strip over the catheter and on top of the first strip. Write your initials and date on the tape.

Showering and bathing

Never immerse the catheter in water. Cover the entire dressing and catheter with an additional waterproof dressing. Secure all edges with bandaging tape. Check with your nurse or physician for additional recommendations.



► Transparent dressing before applying bandage

Suggested instructions

Flushing your PICC

Your nurse or physician will recommend the appropriate number of times a day or week your catheter should be flushed, and the proper solution to use—either sterile saline or heparin. If a double- or triple-lumen catheter is in place, make sure to flush all lumens during routine catheter maintenance.

For routine therapeutic drug delivery, flush with heparin or saline as recommended by your physician after each drug is infused. In addition, the catheter should always be flushed with the physician-recommended solution after each use or after each time the needleless injection cap is changed.

Flushing procedure for routine catheter maintenance

1. Find a clean, quiet, well-ventilated place to work.
2. Gather the supplies you will need for flushing your PICC.

Below is a list of items you may need, depending on your caregiver:

- Sterile gloves
- 10 mL syringes
- Recommended flush solution
- Alcohol preps

Suggested instructions

Flushing your PICC

3. Wash your hands for two minutes with an antimicrobial soap before putting on sterile gloves.
4. Make sure you have the recommended flush solution.
5. Open the vial and fill the syringe. Load the syringe with the amount and type of fluid instructed by your clinician. Always use 10 mL syringes or larger. Smaller syringes can generate higher pressure and may damage the catheter if the fluid is forcefully injected.
6. Remove any air from the syringe.
7. Clean the top of the needleless injection cap with an alcohol prep pad. If the catheter clamp is closed, open it at this time.
8. Very carefully insert the syringe tip into the needleless injection cap.
9. Slowly inject the solution. The solution should go in without any resistance. If you notice any resistance during injection, **stop and call your nurse or physician. Do not force the injection; catheter damage may result.**
10. Remove the syringe from the needleless injection cap and close the catheter clamp (if present).

Suggested instructions

Changing the needleless injection cap

For the catheter to function properly, the needleless injection cap should be changed routinely. Sometimes changing the needleless injection cap can be difficult, especially if the catheter is inserted in your dominant arm. You may need assistance to perform this task. The frequency with which you will need to replace the needleless injection cap will depend on the catheter's use and your nurse or physician's instructions.

Procedural steps for changing the needleless injection cap

1. Find a clean, quiet, well-ventilated place to work.
2. Gather the supplies you will need change the needleless injection cap.

Below is a list of items you may need, depending on your caregiver:

- Sterile gloves
- New needleless injection cap in package
- 10 mL syringe
- Recommended flush solution
- Alcohol prep pads

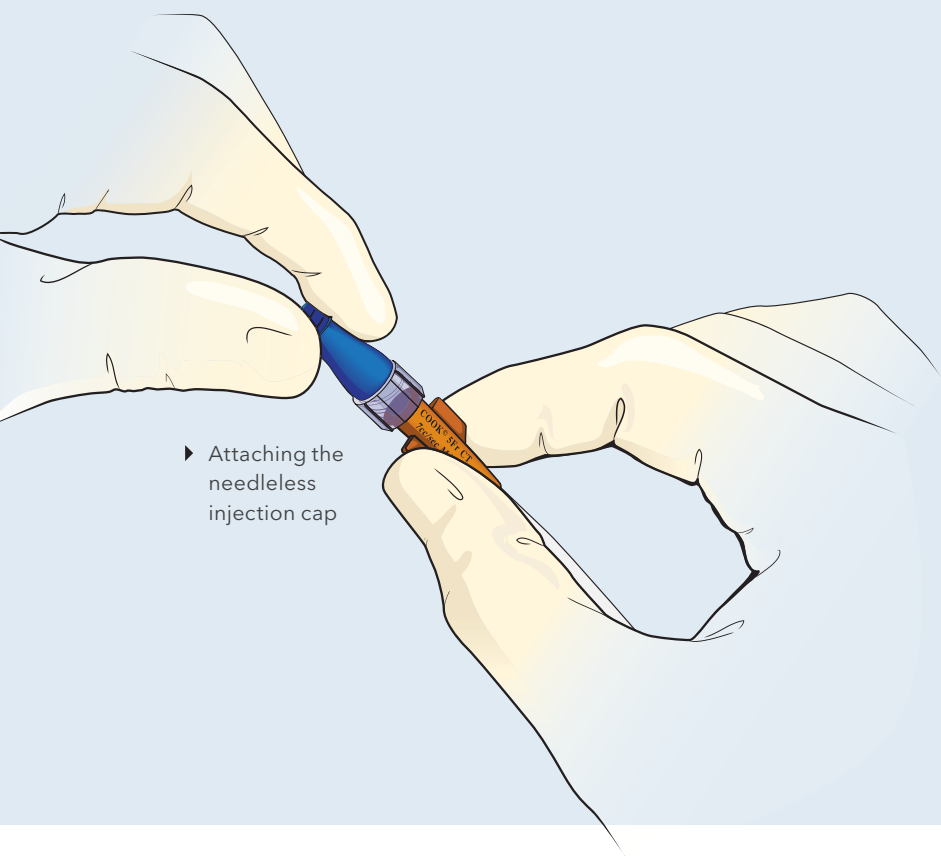
Suggested instructions

Changing the needleless injection cap

3. Wash your hands for two minutes with an antimicrobial soap before putting on sterile gloves.
4. Make sure the clamp is closed.
5. Remove the old needleless injection cap by turning the locking collar counterclockwise. Discard the old cap.

Important: Never touch the open end of the catheter hub or the inside of the new needleless injection cap.

6. Remove the new needleless injection cap from its protective cover and attach it to the catheter by turning the locking collar clockwise. Note: Some types of needleless injection caps have to be prefilled with saline to prevent air from entering the system. Your nurse or physician will show you how to change these types of caps if necessary.
7. Flush with the recommended flushing solution as described on page 17 beginning with number 1.



- ▶ Attaching the needleless injection cap

Troubleshooting

Although you should not expect to experience complications with your PICC, there are some problems you may encounter.

Signal or symptom	Issue
Shortness of breath, coughing or chest pain.	Air enters the bloodstream
Catheter is visibly out of place at the exit site or blood return is not noted before infusion.	Catheter becomes dislocated
Catheter appears damaged or blood is leaking from catheter.	Catheter breaks or is accidentally cut
Swelling around hand, arm or neck.	Central vein thrombosis (blood clot in vein)
Fever, excessive pain, redness, swelling and drainage at the exit site.	Infection
Blood is noticed inside the needleless injection cap or blood is dripping from the hub area of the catheter.	Needleless injection cap accidentally disconnects
Resistance is met when infusing drugs into the catheter.	Occluded (blocked) catheter
Small area of redness up to 8 inches in diameter surrounding exit site, accompanied by tenderness and swelling. This may be more likely to occur within the first 10 days after insertion.	Phlebitis (inflammation of vein walls)

Action

Immediately notify emergency medical services. Clamp the catheter; lie on your left side with your head down.

Notify your nurse or physician. The catheter's tip location must be checked via an x-ray and repositioned.

Clamp the catheter immediately and call your nurse or physician. Carry a spare clamp at all times.

Call your nurse or physician immediately. A blood clot may have formed in the vein and around your catheter. Your physician may infuse a drug to dissolve the clot or remove the catheter.

Call your nurse or physician immediately. To avoid infection, always follow the recommended guidelines. Always wash your hands before handling the catheter. If you have any doubts about the sterility of any of your supplies, discard the item and start with a new one. Keep the dressing dry and avoid any water contact.

Clamp the catheter immediately and call your nurse or physician. Replace the needleless injection cap with a new needleless injection cap. Flush the catheter with your physician's recommended flushing solution as described on page 17.

Stop infusion immediately and call your nurse or physician. Forcing infusion into an obstructed catheter can damage it. This may occur when a catheter has a blood clot inside it or at its tip, preventing fluid from passing. Your physician may infuse a drug to dissolve the clot, or remove the catheter.

Call your nurse or physician. Resolution of the phlebitis is very successful with early treatment. Routine treatment includes warm, moist compresses to the area for 20 minutes 4 times a day. If symptoms have not improved or resolved within 48 hours, contact your care provider.

Glossary of terms

Catheter

A soft tube that is inserted into the body. In this case, the soft tube is a peripherally inserted central venous catheter (PICC) that is inserted into a vein in the arm. The tip of the catheter is located at an area of high blood flow near the heart. Various drugs and fluids are delivered through the catheter so that inserting a needle directly into the vein is not necessary to deliver infusion therapy.

Central vein thrombosis

A blockage in a vein leading to the heart caused by a blood clot around the catheter.

Exit site

Where the catheter comes out of your body, usually in the arm in the case of a PICC.

Heparin

A drug used to prevent the formation of a blood clot inside a PICC.

Catheter lock

The recommended flushing solution fills the entire catheter lumen, helping prevent blood clot formation.

Hub

A plastic adapter located on the catheter. The needleless injection cap is screwed onto the hub of the catheter.

Intravenous (IV) therapy

The administration of drugs or fluids by infusion through the veins.

Lumen

The central channel inside a catheter. PICCs may have one, two or three different lumens in the same catheter.

Needleless injection cap

The needleless injection cap prevents blood from backing up into the catheter. It also allows the delivery of fluids and medication into your bloodstream.

Occluded catheter

A catheter with a lumen that is blocked. Nothing can be infused or withdrawn through the catheter in this case.

PICC (peripherally inserted central venous catheter)

A catheter that is inserted into a vein in either arm and extends to a location near the heart, where medication infused through the catheter will exit and mix with your blood.

Phlebitis

Inflammation of the walls in a vein.

Saline

A salt and water solution.

Saline flush

Sterile saline is infused to clear the catheter after routine therapeutic infusate delivery.

Thrombosis

Coagulation or clotting of blood within a vein.



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