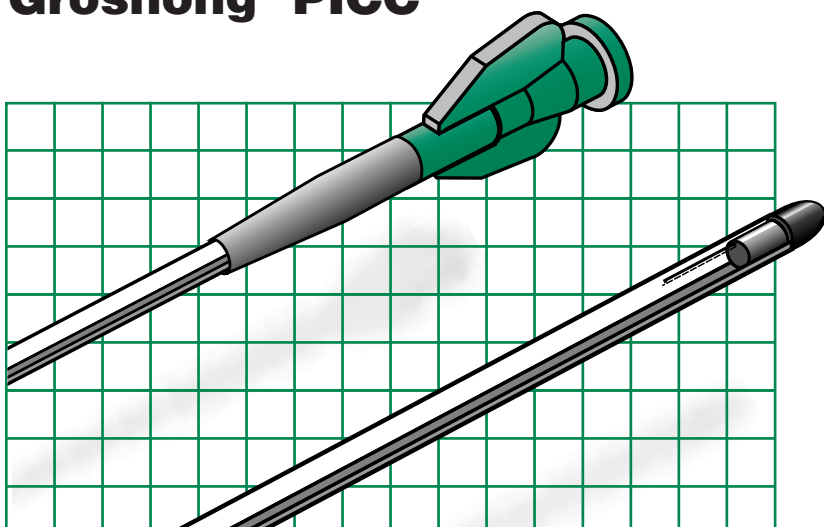


Bard Access Systems

How to Care For Your Groshong® PICC



Patient Guide

BAIRD

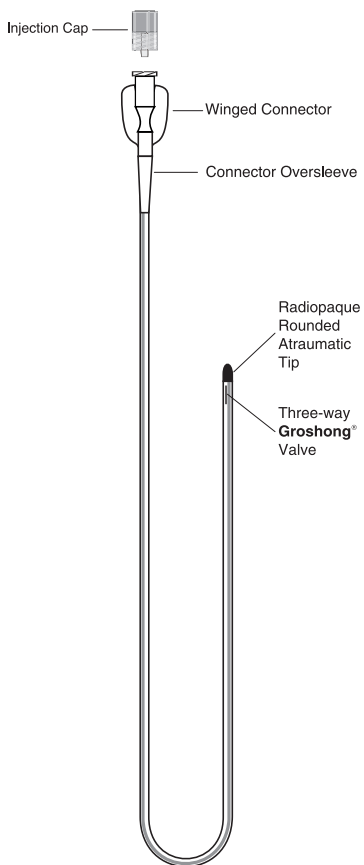
Table Of Contents

Page

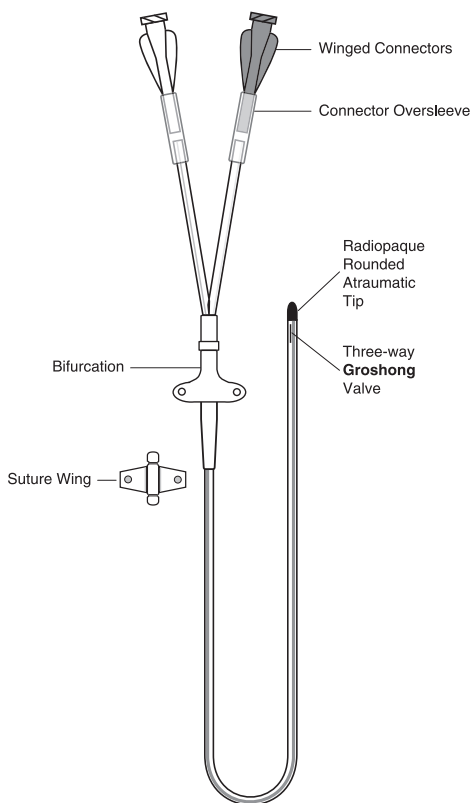
Introduction

1. What is a Groshong PICC?	1
2. How Does the Valve Work?	1
3. What is the Catheter Used For?	2
4. Where Does the Catheter Go Inside the Body?	2
5. What is Required to Take Care of the PICC?	3
a. Site Care	4
b. Flushing the PICC.....	7
c. Changing the Injection Cap.....	9
d. Be Able to Detect Problems and Know What to Do	11
6. Questions Other Patients Have Asked.	16
7. Quiz/Answers	23-24
8. Acknowledgement Card.....	25
9. Catheter Information and Supply List	26

Single-Lumen Groshong® PICC



Dual-Lumen Groshong® PICC



1

What is a Groshong® PICC?

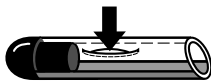
PICC is a short name for “Peripherally Inserted Central Catheter”, reflecting the fact that the catheter is inserted into a large vein in your arm (usually the basilic or cephalic vein). The word, “**Groshong**,” refers to the developer of the patented valve system, Dr. LeRoy Groshong, a Surgical Oncologist. Unlike most catheters, the **Groshong** PICC has a closed, rounded tip. This allows a three-position valve to be placed in the side of the catheter, near the tip. The valve allows liquids to flow in or out but it remains closed when it is not in use.

2

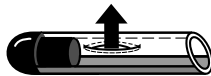
How does the Valve Work?

The valve works when pressure is applied to it. When a negative pressure (suction) is applied (usually by syringe), it causes the valve to open inward, allowing your blood to flow through the catheter into the syringe. When a liquid (medication, nutritional supplements, saline or blood) is introduced into the catheter lumen, the positive pressure pushes the valve open outwards, letting the liquid enter the bloodstream. The valve stays closed when not in use. This means that under normal uses:

- Routine clamping of the catheter outside the body is not needed.
- Heparin is not needed to keep the catheter open.



ASPIRATION
Negative Pressure



INFUSION
Positive Pressure



CLOSED
Neutral Pressure

3

What is the PICC Used For?

There are several uses for the **Groshong** PICC. It is primarily used to allow you to have special treatments over a period of time. Having the PICC will make it more comfortable for you because you will not have to have a needle inserted into a vein over and over again.

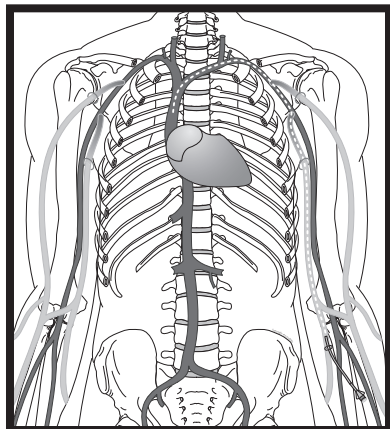
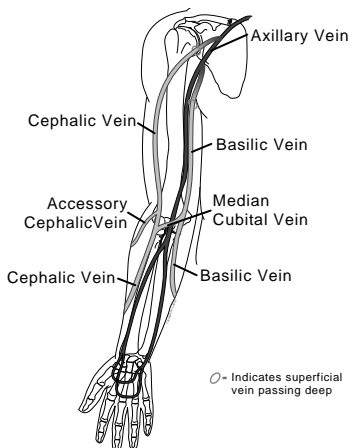
The PICC can be used to give you special fluids, medications, blood products, or to take blood samples for testing. Your doctor or nurse will explain the reasons why you have this type of catheter.

4

Where does the PICC go inside the body?

The PICC is inserted by the nurse or doctor into a vein in your arm and threaded into a large vein that leads to your heart.

The catheter insertion site will need to have special care, which will be explained later in this booklet.





Site Care

Cleaning the insertion site and applying a clean dressing is usually referred to as “Site Care.” Site Care should be done on a regular basis as ordered by your doctor. The frequency will depend on the type of dressing, your general health, the type of fluid being infused into the catheter, and the condition of your skin. The doctor's orders may also be changed for any of these reasons.

You will be instructed on how frequently to change the dressing. You may need to change the dressing daily, three times a week or weekly or if it becomes loose or soiled. Your doctor or nurse will select the most appropriate supplies for your routine care.

The “Site Care” procedure is outlined here for **reference purposes only**. Remember, you will receive instructions from your doctor or nurse on all procedures and you should not attempt any procedure alone until you feel confident that you can carry out all of the steps.

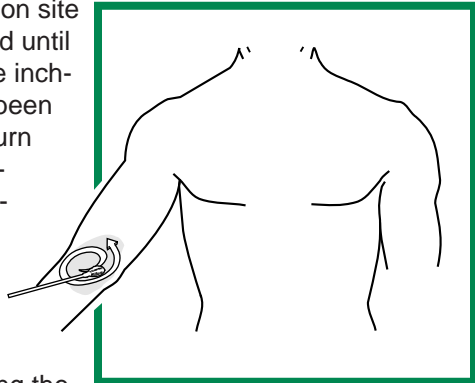
Supplies you will need:

- Sterile gloves
- 3 Alcohol swabsticks
- 3 Povidone iodine swabsticks
- Sterile cover dressing (transparent or gauze)
- Sterile 2 in. x 2 in. gauze dressings
- Tape strips
- Securement device (if needed)

1. Clean the work surface by wiping with a paper towel that has been moistened with alcohol. Wipe dry or allow to air dry. Then place supplies on the cleaned surface.
2. **Wash your hands thoroughly using warm soapy water.** Rinse completely and dry using a clean cloth towel or fresh paper towels.
3. Carefully open the dressing kit, or unwrap supplies, without touching the inside surfaces of the kits or wrappers.

-
- Carefully remove the old dressing, pulling away from the catheter hub and toward the insertion site. Remove the tape or dressing carefully to avoid irritating your skin or pulling on the catheter.
 - Wash your hands again.
 - Carefully observe the insertion site and the skin around it. Look for redness or drainage. Measure the external length of the catheter to ensure it has not gotten longer or shorter. If you notice redness or drainage at the insertion site, have a fever or notice that the external length of the catheter is longer or shorter, **finish** the dressing change and then call your doctor or nurse.
 - Put on the pair of sterile gloves following the procedure you were taught. After you have the gloves on and adjusted, do not touch anything but the sterile supplies you will be using to clean the insertion site.

- Carefully clean the insertion site with an alcohol swabstick starting at the insertion site and spiraling outward until a circle at least three inches in diameter, has been cleaned. Do not return to the catheter insertion site with a swabstick that has touched any skin away from the insertion site.



- Repeat this step using the other two swabsticks. Look at the color of the swabsticks after you have used them for signs of drainage. Allow site area to dry.
- Clean the same area in the same manner with three (3) of the povidone iodine swabsticks, including the part of the catheter that will be lying on the cleaned skin.
- Allow the povidone iodine on the skin and catheter to air dry.
- Some facilities place a securement device at this point. Check with your nurse or doctor to see if this pertains to your PICC.



Flushing The PICC

The PICC is flushed with normal saline to help clear the PICC after receiving medications or having blood withdrawn for lab tests. Your doctor or nurse will tell you when you need to flush and with what solution. If the catheter is used only for periodic treatments, you will need to flush the catheter once a week with normal saline to keep it open and free of clots.

Note: Periods of increased physical activity may require more frequent flushing of your **Groshong** PICC. Consult your nurse or physician for instructions.

There are pre-filled normal saline flush syringes available, or you may be instructed on how to draw up normal saline from a vial into a syringe. **Do not use smaller than a 10 cc syringe for flushing. Do not flush against resistance.**

Supplies you will need:

- Alcohol or povidone iodine wipe.
- 10 cc syringe filled with normal saline, and prepared for use (your nurse or doctor will tell you how much normal saline to use). **Note:** When the infusion volume is a concern in small or pediatric patients, irrigate the catheter with 3 cc of sterile normal saline with a 10 cc syringe. Your nurse or doctor will instruct you when to use these smaller volumes.

The steps in the procedure are:

1. Wash your hands thoroughly.
2. Collect your supplies in a convenient place.
3. Using friction, clean the cap with an alcohol or povidone iodine wipe. Allow the cap to air dry - be sure not to touch the cap during this time. Do not blow on the area or allow the clean cap to dangle since this increases the chance of contamination of the area with bacteria.



Changing the Injection Cap

The catheter injection cap is the only part of the system that you will have to change. The injection cap is used for access and therefore needs to be changed regularly. The frequency will depend on how often your catheter is being used. Your doctor or nurse will instruct you on how often you need to change your catheter injection cap.

Supplies you will need:

- Sterile injection cap
- Alcohol and povidone iodine wipe
- Normal saline
- Syringe

The procedure to change the cap:

1. Wash your hands thoroughly.
2. Open the package of the new injection cap and prepare according to your instructions. Be sure the cap does not touch the outer surface of the package.

NOTE: Pre-fill the injection cap with normal saline. Your doctor or nurse will teach you this additional procedure.

3. Unscrew the old cap and discard, holding the catheter adapter below the level of your heart. (The fluid level in the catheter may drop part-way into the catheter if the connector is held above the level of your heart).
4. Using an alcohol or povidone iodine wipe, clean around the hub where the cap was connected to the catheter. Be careful not to touch the inside of the catheter. Allow to air dry.
5. Pick up the new prefilled cap only by the top. Attach the new cap by firmly screwing it onto the catheter hub.



Be Able to Detect Problems and Know What to Do

Don't expect problems but be prepared if they should occur. The following is a list of potential problems with specific information about each:

PROBLEM *Infection*

SIGNALS You may have a fever with a temperature over 100° F, chills, swelling or oozing at the insertion site. You may note a foul odor, feel pain or heat from the insertion site. General fatigue or decrease in activity in a child, even without fever, may indicate a problem.

WHAT TO DO Call your doctor or nurse.

HOW TO AVOID IT Follow instructions at all times to avoid contaminating the catheter. Wash hands before beginning any procedure. Wear a mask if you have a cold. Avoid persons who are ill. Do your procedures in a well ventilated, but draft-free place.

PROBLEM *Phlebitis*

SIGNALS You may have redness, tenderness or pain, increased skin temperature, swelling or the vein may feel hard. Some patients experience an increased redness around the insertion site about two weeks after the catheter has been inserted. This can be a normal part of the healing process. The redness of normal healing is **NOT** accompanied by pain, and goes away in 24-48 hours. Your doctor or nurse may suggest that you apply a warm compress several times daily until the redness is gone.

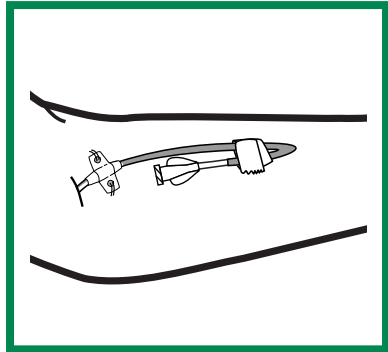
WHAT TO DO Call your doctor or nurse.

HOW TO AVOID IT Avoid strenuous use of the arm your catheter is in. Check your dressing regularly to make sure the catheter remains secure. Change the dressing every seven days or if it becomes soiled or loosened or as instructed by your doctor or nurse.

PROBLEM *Breakage or separation of the Single Lumen Catheter / Catheter Hub*

SIGNALS There may be leaking of fluid when you flush the catheter. You may be able to see the break or the separation of the catheter hub from the catheter.

WHAT TO DO Immediately bend the catheter back on itself, between the break and the skin insertion site, securing it with a rubber band or tape. If there is not enough catheter left to bend it back on itself, carefully pull 1-2 inches of the catheter out from the site, then bend it back on itself and tape securely to your arm. Tape the remaining catheter securely to your arm. Call your doctor or nurse. The catheter may have to be replaced.



HOW TO AVOID IT Do not over-twist the adapter when changing the injection cap. Do not use smaller than a 10cc syringe for flushing. Do not flush against resistance.

PROBLEM *Break or Accidental Cut in the Single Lumen Catheter*

SIGNALS Leaking of fluid.

WHAT TO DO Immediately bend the catheter back on itself, between the break and the skin insertion site, securing it with a rubber band or tape (see previous illustration). If there is not enough catheter left to bend it back on itself, carefully pull 1-2 inches of the catheter out from the site, then bend it back on itself and tape securely to your arm. Tape the remaining catheter securely to your arm. Call your doctor or nurse. The catheter will need to be repaired or replaced.

HOW TO AVOID IT Never have scissors or sharp objects near the catheter. Never use excessive force to flush the catheter. Avoid tugging on the catheter.

PROBLEM *Breakage or separation of the Dual Lumen Catheter, extension leg, or catheter hub*

SIGNALS There may be leaking of fluid when you flush the catheter. You may be able to see the break or the separation of the catheter above the bifurcation, a broken extension leg, or separation of the catheter hub from the extension leg.

WHAT TO DO If the catheter breaks above the bifurcation, bend the catheter back on itself and tape securely. If there is not enough catheter left to bend back on itself, carefully pull 1-2 inches of the catheter out from the site, then bend it back on itself and tape securely to your arm. Call your doctor or nurse. If the catheter breaks on the extension leg, bend the extension leg on itself and tape securely, call your doctor or nurse as this may be repairable.

HOW TO AVOID IT Do not over-twist the adapter when changing the injection cap. Do not use smaller than a 10cc syringe for flushing. Do not flush against resistance. Never have scissors or sharp objects near the catheter.

PROBLEM *Disconnected Injection Cap*

SIGNALS The injection cap will be missing.

WHAT TO DO If you don't have a clean catheter hub, bend the catheter back on itself and secure with a rubber band or tape, otherwise clean the catheter adapter connection and replace with a clean injection cap. Don't use the same injection cap. See changing injection cap instructions. Remove the tape or rubber band. Call your doctor or nurse.

HOW TO AVOID IT Secure injection cap when replacing. Check the cap after each use and periodically each day, to ensure it remains tight and secure.

PROBLEM *Loose Injection Cap*

SIGNALS The injection cap will be loose and easily able to turn.

WHAT TO DO Tighten the injection cap.

HOW TO AVOID IT Check the injection cap after each use and periodically each day to ensure it remains tight and secure.

PROBLEM *Occluded Catheter*

SIGNALS Unable to flush the catheter using normal pressure.

WHAT TO DO **Do not use extra pressure.** Call your nurse or doctor. The catheter will need to be unplugged by your nurse or doctor.

HOW TO AVOID IT Flush on a regular schedule, after every procedure is done, or when blood has backed up into the catheter.

NOTE: Periods of physical activity may require more frequent flushing of your PICC. Consult your doctor or nurse for instructions.

PROBLEM *Difficulty Drawing Blood*

SIGNALS You may be able to flush catheter easily but will not be able to withdraw blood.

WHAT TO DO Call your doctor or nurse.

HOW TO AVOID IT This is caused by the body's attempt to wall off a foreign object by creating a fibrin sleeve around the catheter. It cannot be avoided.

PROBLEM *Air in the Catheter due to Catheter Damage*

SIGNALS You may have shortness of breath or chest pain.

WHAT TO DO This is an **EMERGENCY!** Immediately bend the catheter back on itself, between the break and the skin insertion site, and securing it with a rubber band or tape. If there is not enough catheter left to bend it back on itself, carefully pull 1-2 inches of the catheter out from the site, then bend it back on itself and tape securely to your arm. Tape the remaining catheter securely to your arm. Call your doctor. Lay down and remain calm.

HOW TO AVOID IT Do not use sharp objects near the catheter. Do not leave catheter dangling from insertion site. Make sure all catheter connections are tight and secure.

PROBLEM *Swelling of Neck & Arm on side of Catheter Insertion (Central Vein Thrombosis)*

SIGNALS You may notice swelling of your hand, arm, shoulder or neck on the side of the catheter insertion.

WHAT TO DO Call your doctor. He will need to see you as soon as possible.

HOW TO AVOID IT This happens to a certain number of people for no apparent reason. Call your doctor or nurse.

PROBLEM *Swelling at Exit Site*

SIGNALS You will notice a lump increasing in size over the insertion site and occurring shortly after the insertion procedure.

WHAT TO DO Apply gentle pressure over the dressing for a few minutes. Put ice in a plastic bag and apply over the dressing. Be sure not to get the dressing wet. Call your doctor or nurse if the swelling continues.

HOW TO AVOID IT Follow instructions of your physician or nurse regarding any restrictions of vigorous activities immediately after insertion.

Comments and/or changes as recommended by your nurse or physician.



Questions Other Patients Have Asked

How will I know that everything is okay?

When you look at the catheter and insertion site, and you don't see anything unusual, be confident that there are no problems. Some patients experience an increased redness around the insertion site about two weeks after the catheter has been inserted. This can be a normal part of the healing process. The redness of normal healing is **NOT** accompanied by pain, and goes away in 24-48 hours. Your doctor or nurse may suggest that you apply a warm compress several times daily until the redness is gone. There should not be any drainage around the catheter at this time. You will also know that everything is okay if you can flush your catheter freely.

During the time you have the catheter, your doctor or nurse may have you take your temperature every day and may request that you make other periodic observations. This will be another way of making sure everything is okay.

How will I know if something is wrong?

If you experience problems with the flushing procedure, you may have a clotting problem which requires immediate attention by your doctor or nurse.

A low grade temperature and a feeling of general fatigue/weakness that lasts for more than 24 hours may mean the beginning of an infection. If a child becomes less active for no apparent reason for longer than usual, an infection may be starting even though there is no increase in temperature.

If you have a fever with a temperature higher than 100° F, call your doctor or nurse immediately. Contact your doctor or nurse as soon as you suspect that something is wrong.

Are there any special instructions when caring for a child with a PICC?

Note: Periods of increased physical activity may require more frequent flushing of your **Groshong** PICC. Consult your nurse or physician for instructions. There may need to be some activity limitations, especially just after the PICC is inserted. Substituting quieter activity is recommended instead of imposing activity restrictions.

The child should wear some type of close fitting clothing covering the arm to help keep curious fingers from handling the catheter. Not only is there a danger of pulling out the catheter, but also of contamination of the insertion site from excessive handling. This type of clothing will also prevent the child from putting the catheter in his or her mouth or from chewing on the catheter. It will be necessary to look at the catheter under the clothing at intervals during the day.

If the child is left in the care of a person who is not trained in catheter care, a review of emergency procedures should be done. This should be scheduled prior to the time the person will care for the child. Also make sure that emergency information and emergency phone numbers are available for the care giver.

Can I bathe?

You should ask your doctor this question. The answer will depend on your general health and general risk of infection. It will also depend on how long you have had the catheter in place. The doctor may allow you to bathe as long as you do not get the catheter dressing wet or damp.

Does the insertion site always need a bandage?

The insertion site should always have some type of dressing or bandage on it. The type you use will depend on the recommendation by your doctor and what works best for you. The dressing should be changed every seven days

and as needed if the dressing is loose, soiled or damp, or as instructed by your doctor or nurse.

What do I do if I get a cold?

If you have a cold, your doctor or nurse may instruct you to wear a mask when you are caring for the catheter, especially during the cap change and dressing change procedures.

If I forget to flush on time, what should I do?

You should flush the catheter as soon as you remember. Never force fluid into the catheter, especially if it has been a while since you flushed. If you experience difficulty flushing, contact your doctor or nurse immediately.

What happens if I can't flush the catheter?

If you have difficulty flushing the catheter, check your catheter to be sure that there are no kinks or other obstructions in the catheter. **DO NOT** try to flush against resistance!

If the catheter is not kinked or obstructed and you still cannot flush using the small amount of pressure that you have been applying, contact your doctor or nurse immediately. You may have a clot in the catheter. Never attempt to do anything with the catheter that you were not taught to do. You may dislodge a clot into the bloodstream or you may damage the catheter.

What happens to the PICC if it is damaged?

After you have taken the precaution of bending the catheter on itself and securing it with a rubber band or tape, you will need to have it repaired or replaced. The repair or replacement must be done using special equipment. If there is not enough catheter left to bend it back on itself, carefully pull out 1-2 inches of the catheter from

the insertion site. Tape the remaining catheter securely to your arm.

If I break the needle in the injection cap, what should I do?

Remove the injection cap and broken needle. Apply a new injection cap as previously instructed and complete the flushing procedure. If unable to remove the broken needle, carefully pull out 1-2 inches of the catheter from the insertion site, bend the catheter back on itself and tape down securely. Call your doctor or nurse.

If I run out of supplies, what should I do?

Call the hospital, company, or pharmacy that is supplying you with what you need. If you run out of supplies and can't reach your supplier, call your nurse, doctor or local pharmacist for assistance. You should always have extra supplies on hand so that you won't run out.

If blood backs up into the catheter, is something wrong?

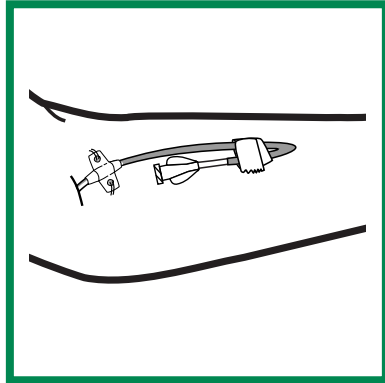
Blood in the cap and catheter won't hurt you but it may enhance the growth of bacteria and increase the risk of clotting or infections. Blood usually backs up into the catheter only when there is increased internal pressure that is created by some form of physical activity or bending over, or if a clot is holding the valve open. If blood is noticed, you should flush the catheter as soon as possible.

What happens if the catheter won't come out when I don't need it anymore?

The catheter is removed by pulling it out. The catheter is made of a material designed to easily slip in and out of skin and blood vessels. The person removing the catheter has been specially trained to handle the procedure and the rare problems that may occur.

What happens if the catheter breaks?

The part of the system that is most likely to break is the end of the catheter that holds the injection cap. If this should occur, immediately bend the catheter on itself between the break and the skin insertion site, securing it with a rubber



band or tape. If there is not enough catheter left to bend it back on itself, carefully pull out 1-2 inches of the catheter from the insertion site, then bend it back on itself and tape securely to your arm. Tape the remaining catheter securely to your arm. **Call your doctor or nurse.** The catheter will need to be repaired by your doctor or nurse.

Note: In case an emergency repair is required, keep a repair kit on hand so that you can bring it with you to the hospital.

What happens if the catheter gets pulled out?

Since the catheter is anchored to your skin, it is highly unlikely that it will come out unless it is pulled on. The catheter may stretch a bit after it has been used a while, and it may seem like it has slipped out. If you suspect that the catheter is slipping out, call your nurse or doctor.

If I have a treatment, do I need to flush the catheter?

The final step in any treatment done through the catheter is a flush of some type. If the catheter has been flushed following treatment, use that time as the last flush and schedule your next flush at the recommended interval.

Be sure to check with your doctor or nurse, since the flushing procedure varies depending on what the catheter is being used for and your level of activity.

Will having the catheter affect my sex life?

Having the catheter in place will not interfere with your sexuality. Some safety precautions taken before you begin any activity will allay any fears. The dressing at the insertion site should be secure and the catheter should be completely covered by the dressing and secured with tape at the hub so it is not hanging free. If blood is noticed in the catheter, flush it with 10cc of normal saline.

Do not hesitate to discuss this with your doctor or nurse.

What should I do if I become allergic to iodine or tape?

There are other choices of solutions and tape that can be used. Alcohol or chlorhexidine can be used to cleanse the area, and other hypoallergenic tapes can be used. It is important to be aware of any skin problems near the insertion site because the danger of infection increases if there is skin irritation.

Should I wear a medical alert type bracelet or have some other information available regarding my catheter?

It would be a very good idea to wear something to alert others that you have a peripherally inserted central venous catheter. If you were in an accident or became ill and couldn't give this type of information yourself, the bracelet could be lifesaving by informing emergency personnel that you have a catheter. There are commercial companies that have medical alert bracelets or you may want to ask for a hospital type plastic waterproof I.D. band as a temporary measure. Another option is the catheter maintenance card given to you by your nurse or physician. Place the card in your wallet and carry it with you at all times.

Should someone else learn the procedures?

Most people can not change a PICC dressing by themselves. Having another person available who has been



Quiz

Answer the following questions by circling **T** for true or **F** for false. The answers are on the next page.

1. If there is a break in the catheter, the first thing that I should do is call the doctor.
T F
2. If the cap becomes loose, it should be tightened immediately.
T F
3. If the cap falls off, replace it immediately.
T F
4. "Site Care" must be done between 9 and 10 a.m.
T F
5. It is okay to use more force during the flush procedure to get the flow going.
T F
6. I can jog or do other activities as long as it is okay with my doctor or nurse.
T F
7. To prevent contamination, I should keep the catheter under my clothing and not disturb it between flushes.
T F
8. During the dressing change, if I notice that the catheter has come out a little bit, I should push it back in.
T F



Answers

- 1. False.** The first thing to do is to bend the catheter back on itself and secure with a rubber band or tape, then call the doctor or nurse.
- 2. True.**
- 3. False.** The cap needs to be replaced but with a sterile cap. If the same cap is reapplied there is an increased risk of infection. Follow the full procedure for cap change.
- 4. False.** You can do “site care” at 3 a.m. if you wish, as long as you do it on a regular basis and are alert enough to do the procedure carefully.
- 5. False.** You may dislodge a blood clot or rupture the catheter which is dangerous. If you have difficulty flushing, stop the procedure and call your doctor or nurse.
- 6. True.** The catheter should not interfere with your normal activity as long as you get permission for the activity from your doctor or nurse.
- 7. False.** You should periodically look at the catheter, especially if long periods of time elapse between flushes. This is especially true for the period of time immediately following the insertion of the catheter.
- 8. False.** You should call your doctor or nurse. Never try to re-insert the catheter. This may lead to an infection.

Comments and/or changes as recommended by your nurse or physician.



Acknowledgement Card

(Place in patient medical record)



I, _____
have received the booklet -- **How to
Care For your Groshong® PICC** --
from _____
(print name of person giving booklet to patient or care-giver)

(signed) (date)

(signed) (date)



Catheter Information and Supply List

Patient Name: _____ Date: _____

Catheter French Size: _____ Product Code: _____

Name of Catheter: _____

Insertion Date: _____ Lot No.: _____

Hospital: _____ Phone: _____

Doctor: _____ Phone: _____

Nurse: _____ Phone: _____

Supplier: _____ Phone: _____

List of Supplies Needed:

Repair Kit: _____ # _____

Dressing Supplies:

Flushing Supplies:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Name of Cap: _____

Other Supplies: _____

Catheter Care Schedule: _____

	SUN	MON	TUE	WED	THU	FRI	SAT
Site Care:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flushing:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cap Change:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Special Instructions: _____

An issued or revision date for these instructions is included for user's information. In the event two years have elapsed between this date and product use, the user should contact **Bard Access Systems** to see if additional product information is available.

Revised Date: July 2002.

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Patent Numbers: 4,547,194; 4,549,879; 4,559,046; 4,671,796; 4,701,166; 4,753,640; 4,995,863; 5,160,325. Other Patents Pending.

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The logo for Bard, featuring the word "BARD" in a stylized, green, outlined font.

Bard Access Systems

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