



York and Scarborough
Teaching Hospitals
NHS Foundation Trust

Your Peripherally Inserted Central Catheter

Hand Held Record and information for patients, relatives
and carers on the insertion and care of a PICC Line

① For more information, please contact:

The Magnolia Centre

The York Hospital

Wigginton Road, York, YO31 8HE

Telephone: 01904 726516

Out of hours telephone Ward 31 on 01904 726031

The Macmillan Unit

Scarborough Hospital

Woodlands Drive, Scarborough, YO12 6QL

Telephone: 01723 342447

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About this leaflet

This leaflet tells you about the procedure known as insertion of a PICC line (often referred to as a **Peripherally Inserted Central Catheter**). It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but it can act as a starting point for such a discussion.

What is a PICC Line?

A **PICC** is a **Peripherally Inserted Central Catheter**. It is a thin flexible tube that is inserted into a vein in the upper arm. The end of the line is positioned in the largest vein in the middle of your chest (superior vena cava) and requires a strict aseptic technique whenever accessing or dressing the device.

The PICC line has a pressure sensitive, two-way valve. This valve opens outwards to allow fluid to be injected into the catheter and inwards to allow blood to be withdrawn. When not in use the valve remains closed, thus preventing blood from flowing back into the catheter and air entering the venous circulation.

Maintenance of a PICC line requires a weekly flush and a dressing change at least weekly or as required. This will be carried out either at home by community staff or in the Hospital clinic. Heparin is not required for flushing this device. The procedure for flushing and dressing the PICC line are outlined in this leaflet.

What are the benefits of having a PICC Line inserted?

The benefit is that this replaces the need for repeated venous cannulation and enables intravenous chemotherapy to be delivered at home or as a day case.

Are there any Alternatives?

Alternatives include

1. repeated peripheral (arm/hand) vein cannulation that may require an inpatient stay,
2. a skin tunnelled central venous catheter
3. Port a cath (a device that is installed beneath the skin) or
4. deciding to stop intravenous treatment.

How is a PICC Line put in?

The PICC line is put in by a specially trained healthcare professional, usually in the hospital outpatient department. It will be inserted using a local anaesthetic. The area of skin at the insertion site will first be cleaned and then numbed so that you don't feel pain whilst it is put in.

When the skin is completely numb, (you may feel some pressure) a needle will be inserted and then removed. Whilst the needle is being removed the PICC line will be threaded through it into a large vein that leads to the largest vein in the middle of your chest (superior vena cava). The procedure shouldn't take long and is usually painless.

The PICC line will be held securely in place by a transparent dressing. You may then need to have a chest x-ray to ensure that the end of the tube is in the correct position.

Before you have the procedure, you will be asked to sign a consent form to confirm that you agree to the procedure and understand the information given to you. This form will be kept in your patient records, and you will also be offered a copy for your own records.

The healthcare professional will use an ultrasound scan to help them to locate the best vein to use. The ultrasound waves produce a small picture on a screen showing clearly the veins in your arm. An ultrasound scan is painless and involves a small device being rubbed gently over your arm.

What are the possible problems when putting a PICC Line in?

It is sometimes difficult to thread the line up the vein. If this happens, it is usually possible to try again using a different vein. Sometimes, the line will go in easily, but the x-ray may show it isn't in the optimum position - if this happens this will be repositioned. If it hasn't been successful overall it will be taken out and replaced.

Serious or frequently occurring risks during and after PICC insertion

- Bruising (at insertion site) occurs in half (1 in 2) of cases.
- You may be sore or have some pain at the insertion site after the insertion. This occurs in 1 in 5 cases.
- Infection occurs in 1 in 10 to 1 in 5 cases.
To help prevent infection after insertion, the dressing is changed weekly and monitored for signs of infection. Infections need to be treated quickly to stop these getting serious.
- Bleeding occurs in 1 in 10 cases (usually small amount, mainly after insertion at the insertion site).
- Blood clots / venous thrombosis occur in 1 in 10 to 1 in 5 cases. To help prevent this, the line is flushed weekly. More information on this risk is in the next section.

- Wrong position of catheter (Malposition) occurs in 1 in 100 to 1 in 20 cases. We take an x-ray to check the position if the practitioner is unable to obtain P waves on the Pilot machine. An X-ray may be required if you have atrial fibrillation or a pace-maker insitu.
- Breaks (Fractures) of the line occur in 1 in 100 cases. The line is secured with a dressing to prevent this.
- Blockage of the line occurs in 1 in 10 cases. The line is flushed weekly to prevent this.
- Palpitations (Arrhythmia) occur in 1 in 100 to 1 in 20 cases. The line can be repositioned to alleviate this.

What are the possible problems I need to know about once it has been inserted?

Infection

It is possible for an infection to develop inside the line or in the skin area where it goes into the vein. You should contact your medical team if you notice the following:

- The insertion area or arm above this area becomes red, swollen or painful.
- You notice discoloured fluid coming out of the PICC entry site.
- You develop a high temperature/fever.

If an infection develops you will be given antibiotics. If these don't clear the infection, or the infection is more serious the line may be removed.

Blood Clots

It is possible for a blood clot (thrombosis) to form in your vein at the tip of the line. If a blood clot does form you will be given some medication to dissolve it and the line may have to be removed. Signs of a blood clot around the PICC line include swelling, redness or tenderness in the arm, chest area or up into the neck (on the same side as the PICC line).

Air in the Line

No air must be allowed to get into your PICC line. Not all PICC lines have clamps. Some lines have caps at the end of the lumens that prevent air from entering. If your line has a clamp it should always be closed when it isn't in use. The line must not be left unclamped when the caps are not in place.

The Line Comes Out

To avoid the line coming out by accident it should always be taped or covered with a dressing. If this dressing comes loose have it replaced as soon as possible.

Information for Community Nurses

Flushing a PICC

Equipment

- Clean trolley or tray
- Clean gloves
- Basic dressing pack / sterile towel
- Use 10ml Luer lock syringes - nothing smaller than a 10ml capacity syringe should be used as the pressure created may damage or split the line.
- BD PosiFlush Sodium Chloride 0.9% solution 10mL
- TKO Bionector
- Sanicloth wipes (70% Isopropyl alcohol 2% Chlorhexidine gluconate)
- Sharps bin

Procedure

- Explain procedure to patient
- Clean trolley or tray thoroughly prior to start of procedure using Clinell wipes.
- Wash hands with soap and water or bacterial alcohol hand rub.
- Open up dressing towel onto clean tray or trolley. Place other equipment (syringes, Sanicloth wipe onto this too).

- Wash hands with bacterial alcohol handrub.
- Prepare a BD PosiFlush Sodium Chloride 0.9% solution 10mL. Maintain sterile environment and place syringe on the sterile field.
- Put on clean gloves
- Place sterile towel under the catheter.
- The catheter hub should be cleaned with Sanicloth wipe for **at least 30 seconds and then allowed to dry** before accessing the catheter (Dougherty & Lister 2008).
- Attach a 10ml Luer lock syringe. Withdraw 5-10mls to check patency of line/obtain flashback (RCN 2010).
- Attach a BD PosiFlush Sodium Chloride 0.9% solution 10mL flush using push pause technique. Finish on positive pressure by removal of syringe
- Change needleless device weekly, or every 100 uses, whichever comes first.
- Remove all sharps / equipment as per Trust policy.
- Wash hands at end of procedure and document care given in the patient's records.

Information for Community Nurses

Catheter site care (PICC)

Following insertion PICC lines will be secured using a SecurAcath© or Statlock dressing. The SecurAcath© securing device keeps the PICC in place and does not require changing until the PICC is removed (NICE, 2022 Securacath for securing percutaneous catheters. Medical technologies guidance (MTG34)). The Statlock dressings must be changed every seven days as the adhesive starts to deteriorate after this time.

The PICC entry site must always be covered by a transparent dressing. Recommended dressing: Tegederm. Dressing choice would be dependent on patient sensitivity. The initial dressing should be left between 24 and 48 hours to prevent the introduction of organisms to the exit site. Dressings should then be replaced each time they become soiled or lose their adhesiveness or **at least once a week.**

Dressing a PICC

Equipment

- Trolley or clean tray for aseptic technique, cleaned with Clinell wipes.
- Basic dressing pack / sterile towel
- Dressing of choice
- Statlock (if required)

- 2% Chlorhexidine gluconate and 70 % Isopropyl alcohol lollipop (Chloraprep).
- Antibacterial hand rub
- Clean gloves
- Sterile gloves

Procedure – SecurAcath© dressing

- Explain the procedure to the patient
- Wash hands prior to start of procedure with soap and water or bacterial handrub.
- Prepare sterile field as per local policy open up new dressing,
- Put on clean gloves
- Remove old dressing, hold the line if needed using an alcohol wipe.
- Check the exit point to detect any sign of reddening, inflammation or local pain. If the site is red or discharging, take a swab for bacteriological investigation and inform the GP and relevant secondary care team.
- Wash hands with alcohol hand rub.
- Put on sterile gloves
- Place sterile towel underneath the catheter. Use Chloraprep lollipop to clean around the exit site, take care not to dislodge the line.
- **Lift up** SecurAcath and clean underneath.

- Allow skin to dry
- Place transparent dressing so they completely cover the PICC insertion site.
- Discard dressing pack
- Wash hands at end of the procedure and document the care given.

(NICE 2017)

- Apply Comfast tubular bandaging over the PICC site.

Procedure - Changing a Statlock dressing.

- Explain the procedure to the patient
- Wash hands prior to start of procedure with soap and water or alcohol handrub.
- Prepare sterile field as per local policy. Open up new dressing, Statlock and Chloraprep wipe.
- Apply clean gloves
- Remove old dressing, taking extra care not to pull the line at the entry site, hold the line if needed using an alcohol wipe.

- Check the exit point to detect any sign of reddening, inflammation or local pain. If the site is red or discharging, take a swab for bacteriological investigation and inform the GP and relevant secondary care team.
- Wash hands with bacterial alcohol hand rub.
- Put on sterile gloves
- Place sterile towel underneath the catheter. Use Chloraprep lollipop to clean around the exit site, take care not to dislodge the line.
- Allow skin to dry
- Apply the white strip provided in the Statlock pack over the PICC line to secure.
- Remove the line from the Statlock butterfly clip.
- Using an alcohol wipe to dissolve remaining adhesive gently remove the Statlock from the skin and discard.
- Using the skin preparation wipe provided in the statlock pack, select and prepare the skin site for fixation of new Statlock.
- Insert the line 'butterfly' into the new Statlock clip ensuring the 'pins' are inserted through the holes on the 'butterfly'.
- Peel backing off Statlock and apply to new skin site.
- **Remove white securing strip**

- Place transparent dressings so that they completely cover the PICC insertion site and the Statlock LEAVE the clamp outside the dressing.
- Discard dressing pack
- Wash hands at end of the procedure and document the care given.
- Apply Comfast tubular bandaging over the PICC site.

(NICE 2017)

Encourage the patient to observe the catheter for signs of redness, swelling, soreness, discharge and report immediately to an appropriate healthcare professional (Guidelines for Preventing Health Care Associated Infections in Primary and Community Care 2003).

Vigorous physical exercise, for example golf, which involves the upper body, may dislodge the line and should therefore be avoided (Smith 2013).

If you have any queries or concerns about any aspect of care and maintenance of a PICC Line please contact the hospital

Information for Community Nurses

Trouble Shooting

If the **patient is pyrexial** (temperature above 38°C) and/or is **experiencing a rigor** - contact the hospital urgently for advice.

Exit site looks infected (inflammation and/or there is exudate around the exit site).

- If patient is also pyrexial see above
- Take a swab
- Contact the hospital - patient may need antibiotics.

The catheter will not flush

- Check if the catheter is kinked, twisted or bent, if it is then straighten it and try again.
- Try to flush PICC with BD PosiFlush Sodium Chloride 0.9% solution 10mL
- Never force the solution into the catheter
- Contact the hospital if unable to flush the line.

Pain, swelling, redness or prominent veins around the neck, shoulder or arm

Contact the hospital immediately - this may be a thrombosis and should be investigated urgently.

Pain, stinging or leaking fluid if the line is flushed

The line may have become dislodged or damaged and may need to be removed.

The PICC Line has been cut, split or damaged

Take action immediately to ensure air does not enter the catheter. If possible use the artery forceps supplied or fold the catheter over on itself and tape in position. Alternatively, remove using gentle, slow traction. Stop if resistance is encountered.

Loose or disconnected Needle free Bionector

- If a bionector becomes disconnected, wash your hands and clean the end of the line with a Chloraprep wipe.
- Screw on a new bung ensuring the inside edge remains untouched. Contact your nurse for further advice.

If these measures fail contact the hospital immediately for advice

In the event of a chemotherapy spillage use the spillage kit provided following the enclosed instructions

Contact numbers for patients receiving chemotherapy

York

During office hours (Mon-Fri 08.00AM-17.00) - call The Chemotherapy Team on 01904 726516

Out of office hours - call Ward 31, York Hospital on 01904 726031

Scarborough

During office hours (Mon-Fri 08.00AM-17.00) - call 01723 342447

Out of office hours – Contact ward 31, York and Scarborough Teaching Hospitals NHS Foundation Trust 01904 726031

My Line Care Record to be completed by Nursing Staff

Date Line flushed	Date dressing changed	Needleless device changed	Dressing type (Tegaderm)	Signed

Comments and Questions

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Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

The Chemotherapy Nurses, The Magnolia Centre,
The York Hospital, Wigginton Road, York, YO31 8HE or
telephone 01904 726516.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email yhs-tr.patientexperienceteam@nhs.net.

An answer phone is available out of hours.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website:
www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

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