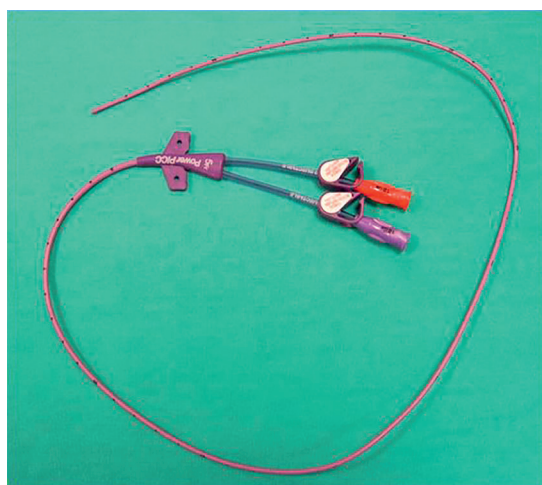


Peripherally inserted central catheters

PICC stands for **p**eripherally **i**nserted **c**entral **c**atheter. These are long, thin, flexible tubes (catheters) which are inserted into a vein in your arm (peripherally), and threaded into the central veins in the chest. A PICC provides short and medium-term access to the venous system for medications and medical fluids.



An example of a PICC

How will the procedure benefit me?

Placing a PICC is a relatively simple procedure with very few potential complications. Once in place, a PICC is a safe, stable and effective way to deliver intravenous (IV) medications which can remain in the body for weeks or months, doing away with the need to subject your veins to the numerous needle pricks necessary if the PICC was not there. Some medications are potentially harmful to the inner lining of your smaller veins; PICC lines allow these medications to be delivered directly to larger veins that are less likely to be damaged.

How should I prepare before the procedure?

You should tell your doctor about any medications you are taking, any allergies you have, and if you are pregnant. Relevant blood testing will be performed if necessary.

The procedure

The procedure will be performed in the department of interventional radiology (IR). You will be asked to lie on the examination table and you will be connected to monitors that will track your heart rate, blood pressure and pulse during the procedure. The PICC may be inserted in either arm; you will be asked to stretch this arm out beside you on a support. Ultrasound imaging is used to identify and choose the most suitable vein, and a mark made on your skin.

A tourniquet is placed loosely around the arm. The skin is cleaned with sterilising fluid and the area covered with sterile drapes with an opening at the site of insertion. The tourniquet will then be tightened on your arm, and, using the ultrasound probe, the appropriate vein is again located. Local anaesthetic is administered to the skin and tissues between the skin and the wall of the vein. This is the only painful part of the procedure. Once the stinging of the anaesthetic wears off, all you will feel is a little pushing and pressure. Intravenous pain relief medications and sedation are not usually required, but can be given if necessary.

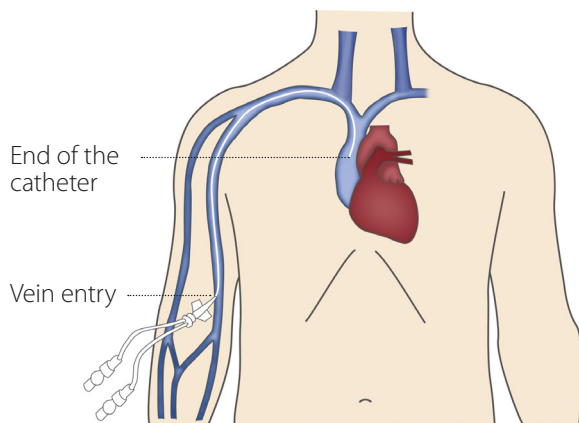
Once the anaesthetic has fully taken effect, a needle is inserted into the vein, through which a skinny guide wire is passed. A tube is passed over the guidewire, through which the PICC is then advanced into position using fluoroscopy (live x-rays) to position the catheter exactly. Only rarely is it necessary to inject a liquid (an iodine-based contrast agent) to outline your veins on screen. Once the PICC is in the correct position, the catheter is checked to make sure blood can be withdrawn, and sterile water can be injected.

The insertion site is cleaned, the catheter is dressed and a securing device applied. Components of the dressing usually include an adhesive device to keep it in place, and a transparent dressing which allows you to see the insertion site.

What are the risks?

PICC line insertions have a relatively low complication rate. Occasionally, the catheter may irritate the lining of the vein, causing inflammation. This becomes more likely if the PICC is left in place for a long time (2 months or more). Any device inserted into the vascular system increases the risk of thrombus or clot formation, either in the vessel or in the catheter, which could result in partial or complete blockage.

Blockage of the catheter is the most common complication, which can be prevented by adequate care and managed easily usually by flushing, or, occasionally by swapping it for a new one. Damage to the catheter can occur with any PICC, most often from improper care. Following the instructions for the care of the PICC is key to preventing catheter damage post-insertion.



PICC in place

What should I expect after the procedure? What is the follow-up plan?

Most patients who receive PICC lines are free to leave the hospital shortly after the procedure.

You will be advised on the following key aspects of care:

- Keeping the insertion site clean, dry, and covered with a bandage
- Following instructions for changing the bandage. Usually this is done weekly; however, more frequent dressing changes may be needed, especially if the dressing becomes damp, dirty, loosened, or is no longer adherent.
- Avoiding lifting or activities that may loosen the PICC
- Wearing a PICC sleeve / tubigrip to prevent it from catching on things
- Looking out for complications

In some instances, you may need to clean and flush the line regularly to keep it clear and to stop you from developing any problems. You will be given clear instructions if you are required to do this.

Your doctor will tell you how long the PICC should remain in place, and let you know the plans for its removal.

www.cirse.org/patients

This document contains general medical information. The information is not intended or implied to be a substitute for professional medical advice, diagnosis or treatment.