

Blood vessel catheters used in newborn babies

Babies admitted to the Neonatal Department (NICU or Special Care) may need a catheter. This will only happen if it is essential for your baby's care.

What is a catheter?

A catheter is a flexible tube put into a blood vessel. They are sometimes called catheters, cannulas, or lines.

Babies in NICU may need one or more catheters placed in either

- their veins; these are known as intravenous or venous catheters, or
- their arteries; these are known as arterial catheters.

(Intra-) Venous catheters

Venous catheters are placed by nurses (peripheral cannulas) or doctors. To protect your baby from and infection by bacteria (germs) that may get into the blood stream during the insertion of a catheter, we will clean the area of their body where the cannula is put in. We will wear gloves and use clean equipment. This is called aseptic technique

What is an intravenous catheter for?

- To give medicines
- To give fluids or nutrition into your baby's or if your baby cannot be fed
- To give blood or blood products

Types of catheters inserted in veins (intravenous catheter)

- Peripheral (Intra)venous Catheter (IV's)
- Umbilical Venous Catheter (UVC)
- Peripherally Inserted Central Catheter (PICC line)
- Jugular/Subclavian Central Venous Catheter

Peripheral (intra)venous catheter

This is a small catheter, which is inserted into a vein in your baby's foot, leg, hand or arm. They are often called cannulas.

Umbilical venous catheter

An umbilical venous catheter (UVC) is a soft tube inserted into the vein in your baby's umbilical cord stump. It may be used during their first week of life. The UVC is inserted like a cannula but as a sterile rather than aseptic procedure. This means nurses and doctors will wear a hat, mask, sterile gown and sterile gloves when inserting them. We ask that only those people to be in the room when the catheter is inserted. This will help us keep the procedure sterile.

After your baby's line has been put in, an X-ray is taken to make sure the tip of the UVC is in the right place.

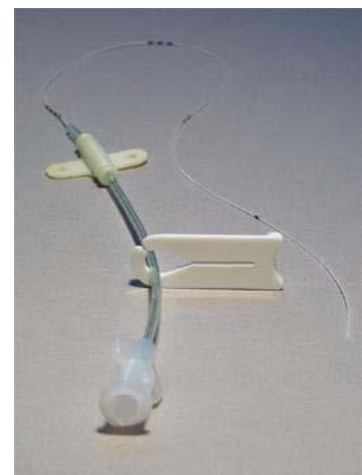


Peripherally Inserted Central Catheter (PICC line)

A PICC line is a soft, flexible intravenous (IV) line, about 20-30cm long. It is inserted through a vein in your baby's arm or foot and threaded into one of the major blood vessels leading to their heart. The PICC line is inserted like a cannula but as a sterile rather than aseptic procedure. This means nurses and doctors will wear a hat, mask, sterile gown and sterile gloves when inserting them. We ask that only those people to be in the room when the catheter is inserted. This will help us keep the procedure sterile. After your baby's line has been put in, an X-ray is taken to make sure the tip of the PICC line is in the right place.

The procedure may take up to 30 minutes in most cases. Your baby will be given pain relief before the procedure.

PICC lines can stay in place for many days or weeks. This line reduces the need for lots of peripheral intravenous cannulas. Sometimes, even with a PICC line, your baby may need another intravenous cannula to receive a blood transfusion or medicine that cannot be given through their PICC line.



Jugular/Subclavian Central Venous Catheter

A central venous catheter is a soft intravenous line 10-20 cm long inserted into the vein in your baby's neck (i.e. jugular vein) or the vein under their collar bone or clavicle (i.e. subclavian vein).

These lines are used when all other intravenous options for are no longer available and your baby needs to be given essential nutrition and medicine intravenously. These central venous lines are inserted by an anaesthetist, sometimes using an ultrasound for guidance. After your baby's line has been placed, an X-ray is taken to make sure the tip of the line is in the right place. Your baby will be given pain relief before and during the procedure.

Arterial catheters

Arterial catheters are placed by doctors.

What is an arterial catheter for?

- To measure blood pressure
- To take blood samples

Types of catheters placed in arteries (arterial catheter)

- Peripheral arterial catheter
- Umbilical Arterial Catheter (UAC)

Peripheral Arterial Catheter

A doctor will place a catheter into your baby's artery on their wrist or foot. They will use a small catheter, the same as used for a peripheral intravenous catheter.

Umbilical artery catheter (UAC)

An umbilical arterial catheter (UAC) is a soft tube inserted into one of the arteries in your baby's umbilical cord stump. It may be used in their first week of life. The UAC is inserted like a cannula, but as a sterile rather than aseptic procedure. This means nurses and doctors will wear a hat, mask, sterile gown and sterile gloves when inserting them. We ask for only those people to be in the room when the catheter is inserted. This will help us keep the procedure sterile.

After your baby's line has been put in, an X-ray is taken to make sure the tip of the UAC is in the right place



What are the possible complications of using catheters?

Complications are uncommon, and your baby is unlikely to experience them.

Complications can include:

- bleeding
- blockage
- leakage causing swelling and skin breakdown. This may lead to infection
- bruising
- infection
- inflammation of the vein (thrombophlebitis)
- the line moving to an unintended organ (rare)
- a hole in a blood vessel (rare)
- breakage of the PICC line itself (rare)
- blood clot formation around the tip of the line or within the artery (rare)
- dislodgment of a blood clot (very rare). This may cause temporary or permanent loss of blood flow to the limb.

All catheters are removed when they are no longer needed or as soon as any of the above complications occur.

If you have any further questions, please ask your doctor, nurse or midwife.

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