

Port insertion for venous access

This information sheet explains about the procedure to insert an implantable port. It describes what the procedure involves and what to expect when your child comes to the Interventional Radiology team for treatment.

Please note that this leaflet is not meant to replace discussion between you and your child's doctor. You should raise any questions you may have with the doctor who has referred your child for, or is performing, the procedure.

What is an implantable port?

An implantable port consists of a titanium or plastic chamber connected to a thin plastic tube (catheter). The entire device is placed under the skin and the catheter is threaded into a vein in the neck until it reaches the right side of the heart. To access the bloodstream, a special type of needle is inserted through the skin into the chamber. An implantable port provides easy and reliable access to your child's bloodstream.

Why does my child need an implantable port?

There are many reasons why your child might benefit from an implantable port, but the most common reasons are for taking regular blood samples for testing or for giving medicines such as chemotherapy or other medicines intravenously on a long-term basis.

There are various types of central venous access device. However, depending on your child's age and the reason why they need one, some options may not be appropriate. The doctors and nurses will explain the benefits and drawbacks of each available option before you and your child make a decision.

How does my child prepare for an implantable port insertion?

You may need to come to the hospital before the procedure so that your child can have a pre-admission assessment to check that they are well enough. The appointment may involve taking blood samples and other tests. Sometimes an implantable port insertion happens while your child is still in hospital.

The doctor will explain the procedure in more detail, discuss any worries you may have and ask you to sign a consent form giving permission for your child to have the procedure. If your child has any medical problems, please tell the doctors.

Many of the procedures we perform involve the use of X-rays. Legally, we are obliged to ask any girls over the age of 12 whether there is any chance they might be pregnant. This is to protect babies in the womb from receiving unnecessary radiation.

How is an implantable port insertion performed?

Your child will need to have a general anaesthetic for this procedure. It is important that your child does not eat or drink anything for a few hours before the anaesthetic. This is called 'fasting' or 'nil by mouth'. Fasting reduces the risk of stomach contents entering the lungs during and after the procedure. You will be informed the night before the procedure of the time that your child should be 'nil by mouth' – in other words, have nothing to eat or drink before the anaesthetic. It is equally important to keep giving your child food and drink until those times to ensure they remain well-hydrated and get adequate nutrition. This may involve waking your child in the night to give them a drink which we recommend.

Once your child is under general anaesthetic, the operator will inject some local anaesthetic into the side of the chest and make an incision to create a 'pocket' under the skin. The chamber of the port is inserted into this pocket and is stitched in place. The operator will then use an ultrasound scan to look for a suitable vein in the neck. Once they have found one, they will inject the area around the vein with local anaesthetic to make it numb for a few hours. The catheter section of the port is then tunnelled under the skin on the chest wall until it is near the neck vein. They then make a small puncture into the neck vein and thread the catheter into it until it reaches the right side of the heart. The operator makes a final check that the implantable port is working correctly by taking an X-ray. They will then confirm this by taking a small blood sample from the port, flush the port with a salt water solution (saline) and then fill it with heparin solution to stop blood clots forming.

The chest incision is closed with dissolvable stitches and then covered with sticky paper stitches. These should stay in place for five days or so. The small puncture wound in the neck is covered with a dressing. The port can be used immediately by inserting a special needle into the reservoir. If a needle is inserted, the entire area will be covered with a see through dressing to keep the needle in place and help prevent infection.

Who performs port insertion and where?

Port insertion is performed by a healthcare professional specially trained in image guided procedures. This can be a nurse, doctor or radiographer. Most often it is done in the X-ray department or sometimes in an operating theatre with X-ray equipment.

What are the potential risks or complications of port insertion?

The implantable port is inserted while your child is under general anaesthetic. Although every anaesthetic carries a risk, this is extremely small. There is a small risk of bleeding when the incisions are made but this is unlikely as they are very small. As the port gives direct access to the bloodstream, infection can be a risk after the procedure. You will need to look after the port very carefully to help prevent it from becoming infected or blocked.

What happens afterwards?

Your child will return to the ward after they have recovered from the general anaesthetic. Some children feel sick and vomit after a general anaesthetic. Your child may have a headache or sore throat or feel dizzy, but these side effects are usually short-lived and not severe. The area where the implantable port was inserted will feel uncomfortable for a while afterwards but this soon passes.

The nurses will give your child pain relief as needed. Your child can start eating and drinking as normal once they feel like it. The implantable port can be used immediately if required. The sticky paper stitches should stay in place for five days or so but will then start to drop off – this is normal. The see-through dressing may need to be changed after 24 hours, particularly if the incision used to create the pocket for the port has oozed after the operation.

If your child does not need to stay in hospital for treatment, you can return home once you are confident in caring for the port. Your nurse will provide you with instructions on how to look after the port at home.

In the first few days after insertion, you should call the hospital if the neck or chest incisions look red, swollen and feel hotter than the surrounding skin, the incisions are oozing, your child is in a lot of pain and pain relief does not seem to help, or your child has a temperature of 38°C or higher.

Notes