



Great Ormond Street Hospital for Children NHS Foundation Trust

Cardiac catheterisation: information for families

Cardiac catheterisation is a procedure used to diagnose and treat certain heart conditions. This leaflet explains about the procedure, what it involves and what to expect when your child comes to Great Ormond Street Hospital (GOSH). If you have any questions, please telephone Walrus Ward (Cardiac Day Care) on 020 7813 8347 or out of hours, please telephone Bear Ward on 020 7829 8829

A catheter (thin, plastic tube) is fed through the veins or artery until it reaches the heart. Once it is in position, various things can be done:

- Contrast (dye) can be injected into the catheter to show up the veins in and around the heart
- Balloons can be used to widen or open up narrow or blocked blood vessels
- Devices can be used to close holes or blood vessels that shouldn't be there
- Stents can be needed to maintain a better size of an original blood vessel
- Blood samples can be taken from various positions in the heart to measure how well blood is flowing

At GOSH, most cardiac catheterisations are carried out under general anaesthetic. Older children may be able to have sedation but this will need discussing with the cardiologist

Preparing for the procedure

Most children need to come to the hospital before the procedure for a pre-admission appointment. For more information, please see our *Pre-admission clinic for cardiology* leaflet

The doctors and nurses will make sure your child is well for the procedure. The doctors may also ask for some blood tests to be done. If your child

has any medical problems, like allergies, please tell the doctors about these

The cardiologist will explain the procedure in more detail, discuss any worries you may have and ask you to sign a consent form to give your permission for the procedure

You will also meet the anaesthetist who will explain about the anaesthetic

If your child is taking warfarin, this will need to be stopped prior to the procedure, to reduce the risk of serious bleeding during or after the cardiac catheterisation. Please tell the doctors and nurses at pre-admission if your child takes warfarin so that this can be arranged

What happens before the procedure?

On the day of the procedure, your child will need to arrive on the ward at the time stated in your admission letter. The nurses will phone you the night before to confirm the time they can last have something to eat and drink

Many of the studies we perform involve the use of x-rays. Legally, we are obliged to ask any girls over the age of 12 if there is any chance they might be pregnant. We will ask for a urine sample to carry out a pregnancy test for any girls over 12 years old. This is to protect babies in the womb from receiving unnecessary radiation

The nurses will ask lots of questions to make sure that your child is ready for the procedure. They will then take your child to the anaesthetic room. You will be able to stay with your child until they're asleep if you would like. The nurse will then bring you back to the ward to wait

What does the procedure involve?

Once your child is under general anaesthetic, their groin will be cleaned with antiseptic solution. The doctor will insert a needle into the vein or artery in the groin and then push a guide wire along it. They will then remove the needle and thread the catheter over the wire into the vein, removing the guide wire afterwards. The catheter will be threaded through the vein until it reaches the heart. X-rays are used to visualise the catheters in the heart and show the dye when injected. The doctor will then carry out the procedures needed. Depending on the exact procedure, the cardiac catheterisation will last between one and four hours

Are there any risks?

At GOSH, we perform lots of cardiac catheterisations each year and the team looking after your child are very experienced. However, as with all procedures there are risks which, although unlikely, you should understand

Every anaesthetic carries a risk, although this is extremely small. There is only a small risk of infection because no large surgical incisions are necessary

There is a risk of bleeding from the groin area where the catheter was inserted. This risk is minimised by applying pressure for a few minutes after the procedure and lying still in recovery. A bruise may also develop at the groin site which may cause some discomfort, but pain relief like paracetamol is usually enough

There is a very small risk of blood flow being blocked in the veins. The nurses will be checking

the blood flow by feeling the pulses in your child's feet. The doctors may want to give another medication if there is reduced blood flow

It is extremely rare to have an allergic reaction to the dye but some young children become flushed for a few hours afterwards. The dye is removed from the body by the kidneys and is passed out in the urine so it's important that they drink well

What happens afterwards?

Your child will return to the ward after they have recovered from the anaesthetic. Some children feel sick and may vomit but the anaesthetists can give medication to try and prevent this. Your child may have a headache, sore throat or experience some dizziness but these side effects are usually short-lived and not severe

Your child will need to stay in bed for the first 2 hours to reduce the risk of bleeding. The nurses will be checking on your child regularly and will then help them to get out of bed

Once your child has fully recovered, had something to eat and drink, passed urine and mobilised you will be able to go home. The cardiologist will discuss the results with you on the ward. If further opinions are needed, a letter will be sent out to you at a later date

When you get home

You should call the hospital if:

- Your child starts bleeding from the groin site. Apply firm pressure to the area for 5 to 10 minutes. If the bleeding does not stop, call 999 for an ambulance
- Your child is in a lot of pain and pain relief does not seem to help
- The area where the catheter was inserted looks red, swollen and feels hotter than the surrounding skin
- Your child is not drinking any fluids after the first day back home