What is it?

The procedure itself involves passing a fine tube up through one of the big blood vessels, usually in the groin, and threading it into the heart. Measurements of pressure and oxygen levels can be obtained. Dye can be injected and x-ray pictures taken as the dye is pumped around the heart, to show anatomy and blood flow in detail. The catheter is then removed, and a plaster put over the site. No stitches are usually required, as the ‘hole’ left is tiny.

This procedure can be performed for diagnostic purposes, as an investigation. It can also be performed for interventional purposes – to treat a condition. Procedures include stenting and stretching (balloon dilatation) of arteries and valves. Occlusion of some holes in the heart, such as Atrial Septal Defects (ASD) Ventricular Septal defects (VSD) and Patent Ductus Arteriosus (PDA) may also be treated using this technique. (More detailed information sheets are available for these procedures).

This procedure, whether for diagnostic or interventional purposes requires a short stay in hospital and the course of action is much the same for either.

What are the risks/complications?

Statistically, overall risk is defined as less than 1%. Your cardiologist will discuss your child’s individual risks and benefits.

Potential risks/complications

Nausea/vomiting:
Some children may feel sick following an anaesthetic.
All children react differently.

Clots:
Very occasionally passing the catheter tube through the blood vessel in the groin can cause disruption to the blood flow in the leg. This will result in the child’s leg feeling cool.
with weak pulses. We would need to give some medicine through the ‘drip’ to treat this. It usually requires a night in hospital after the procedure.

**Heart rhythm disturbances:**
Occasionally passing the catheter tube into the heart can cause temporary disruption to the heart’s conduction system.

**Bleeding:**
This can occur from the groin site (or any alternative site that is used) and requires firm pressure applied until bleeding stops. Rarely, bleeding can occur inside the heart itself. This is more serious and requires immediate treatment to stop the bleeding.

**Reaction to the dye:**
Rarely occurs but is a possible side effect.

**Reaction to the anaesthetic:**
Rarely occurs but do inform the anaesthetist if your child has previously been unwell in any way following an anaesthetic.

**Death/serious neurological injury:**
Very rarely occurs.

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**What are the benefits?**

**Diagnostic procedure:**
Overall, this is a very safe procedure – but not a zero risk. It is important to obtain a precise diagnosis, and an accurate picture of the anatomy and physiology of your child’s heart. This will enable future planning and timing of the exact type of surgery/treatment your child will require.

**Interventional procedure:**
Less invasive than ‘open’ surgery, no scar and quicker recovery period than ‘open’ heart surgery.

A video, “Children and Catheterisation” is available from the British Heart Foundation, telephone number 020 7935 0185. We also have copies in the Children’s Heart Centre available for
you to borrow. Many parents have found this useful. Please
ask the Cardiac Liaison Nurses about this.

Consent

The cardiologist will discuss the procedure in detail and obtain your written consent. If there is anything that you are unsure about, or if you have any questions, please ask the doctor before signing the consent form.

What happens on the day?

This procedure may involve an overnight stay following the procedure. Some children may have the procedure as a day case; the consultant will decide if this is appropriate for your child.

Once settled into the ward, your child will be checked by a doctor and nurse to ensure they are well enough to have the procedure. Reasons not to proceed would include heavy colds, coughs, fever etc. You will also have an opportunity to meet the anaesthetist prior to the procedure.

The procedure itself takes place in the Cardiac Catheter lab. Your child will be given a general anaesthetic. They will be completely asleep throughout the procedure.

Before the procedure, your child will need to have an empty stomach, due to having a general anaesthetic. Current practice for fasting is:

- Solids and cows milk 6 hours
- Formula milk 4 hours prior to procedure
- Breast milk 3 hours
- Clear fluids – water and 2 hours squash, **not fruit juice**

‘Magic’ cream (Ametop/Emla) will be applied to the back of your child’s hand to numb the skin and a cannula (drip) inserted whilst in the cardiac catheterisation room. You will be able to accompany your child and stay with them until they are asleep.
Following the procedure, your child will go from the cardiac catheter laboratory to the recovery area nearby until awake. Once awake a nurse from the ward will collect your child and take them back to the ward.

Once on the ward, we will need to ensure that your child has recovered from the anaesthetic and the procedure. They may eat and drink shortly afterwards as tolerated.

If admitted as a daycase, then the minimum recovery time would be approximately 4 hours. The doctor will need to see you and it may be necessary to do another scan (Echo) before discharge.

Your cardiologist will come and talk to you after the procedure and discuss the findings and implications of these.

The Hospital experience can be strange and unsettling for some children, so do not be concerned if your child is more clingy, easily upset or has disturbed sleep. Just be patient and understanding and this should resolve quickly.

**Cardiac catheter discharge information**

Your child cannot go home on public transport after a general anaesthetic. Occasionally, the anaesthetic may leave your child feeling a bit sick for the first 24 hours, the best treatment for this is rest and small frequent amounts of fluid and toast or biscuits. If vomiting persists for longer then please contact your GP.

- Normal baths may be taken after 48 hours. Plasters may be removed at this time if still in place.

- If your child appears to be in any discomfort then Paracetamol (Calpol) may be given in the dose that you would normally give if they had a temperature. See bottle for doses appropriate for your child.

- Please contact Bellhouse-Drayson Ward, the children’s cardio-respiratory ward on 01865 231247/8 if:
• Pain from the puncture site continues for more than 48 hours or is getting worse.
• There is any new swelling or redness around the puncture site.
• Your child has a temperature for more than 24 hours after the procedure or a temperature above 38°C.
• Should there be any bleeding from the puncture site then apply pressure to the site for 5-10 minutes with a clean cloth and ring for advice.
• There is a difference in colour or temperature in the leg used for the catheterization compared to the other leg.

• Your child may return to playgroup or school after 2 days. They may restart PE & swimming etc after a week.

• Ensure that you understand what was found during your child’s procedure and that you know about follow-up arrangements.

• Discharge medicines:

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If you have any questions or concerns then please contact us:

Cardiac Liaison Nurses: 01865 234985  
Bellhouse-Drayson Ward: 01865 231247/8  
John Radcliffe Hospital: 01865 741166

If you need an interpreter or need a document in another language, large print, Braille or audio version, please call **01865 221473**. When we receive your call we may transfer you to an interpreter. This can take some time, so please be patient.