

# Pediatric Cardiac (Heart) Catheterization

## A Guide for Patients

To complete the evaluation of your child's heart problem, the cardiologist may need to perform a heart catheterization. Your child will be admitted to the hospital for this procedure.

### Who does it?

The heart catheterization is done by a pediatric cardiologist and a team of trained professionals who specialize in the catheterization procedure.

### Why is it done?

A heart catheterization is one of the ways to evaluate the heart defects and how the heart is functioning. With the information from the catheterization, physical examination, ECG, ECHO and other diagnostic tests, the cardiologist can plan the best care for your child. A catheterization must be done before some types of operations to provide the information the surgeon needs. For some children, the catheterization may be repeated after surgery to evaluate results of the operation. A catheterization is done only if the cardiologist cannot obtain the information he/she needs from other diagnostic tests. It is never done unless necessary.

Increasingly heart catheterization is used as both a diagnostic procedure and a method of treatment. Some treatments are:

- Balloon Atrial Septostomy
- Balloon Angioplasty




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- Balloon Valvuloplasty
  - Occluding Devices
  - Stenting Procedures
  - Ablation

### **What are the risks?**

For most children, catheterization is a safe procedure. It carries additional risks for very sick newborns and children. The cardiologist will explain if any special risks are there for your child. Parents are asked to sign a consent form before the catheterization.

### **What happens before the catheterization?**


At the time of booking, the doctor or the nurse will set the time and place of arrival, tell you when to feed your child at the latest, when give his medicines and answer any other questions. For several hours before going to the cath lab, your child will not be allowed to eat or drink. In most instances, your child will be admitted to the hospital on the day of the catheterization. He will be examined by doctors and nurses. Some children may need blood and urine tests, an EKG, chest X-ray or echocardiogram. An intravenous (IV) will be placed in a vein in the arm or hand to give fluid and medicine as needed. Before the catheterization, a member of the Heart Care team will speak with you to make certain you understand the procedure. Before the start of the procedure, he will receive either a sedative, which will make him relaxed or sleepy, or general anesthesia

### **Where is it done?**

The catheterization is performed in a large room with special equipment called the catheterization laboratory or cath lab. A nurse or technologist will remain with your child to care for him and assist the doctor. Parents accompany their child to the cath lab and wait in the nearby lounge while the catheterization is being performed.

### **What happens during the catheterization?**

In the cath lab, your child is moved onto a special bed and connected to a monitor. The monitor allows the team to carefully observe his blood



pressure and heart rate. An area of skin near large blood vessels, usually the groin, is cleaned with special soap and covered with sterile (very clean) towels. Then, this area is made numb with an injection of local anesthetic. Next, the cardiologist inserts the catheter (a long thin plastic tube that is soft and hollow) into a blood vessel in the sterile area. The catheter is passed gently up the vessel into the heart. In the heart, blood pressure is measured in each chamber and the surrounding blood vessels. Oxygen content of the blood also is measured in all these areas. If additional studies or treatments are needed, they are done at this time.

Finally, a special fluid called dye or contrast is injected through the catheter. The fluid enables the structures of the heart to be photographed by X-ray cameras. When all the information has been obtained, the catheter is removed from the blood vessel. It slides out easily. Pressure is applied over the vessel for several minutes so bleeding will not occur. Then, a large bandage is placed on the area to provide additional pressure.

### **How long does it last?**

Most of the catheterizations last for two to four hours. Several factors influence how long your child will be in the cath lab:

- How well the child is sedated and calm
- The ease in finding blood vessels to be used for catheterization
- The time needed to enter each chamber of the heart and the surrounding blood vessels
- The number of other studies or treatments required

The cardiologist will let you know how long he expects the procedure to last. In addition, a member of the staff will tell you periodically how the catheterization is progressing.

### **What are the results?**

The cardiologist who performs the catheterization talks with you about what he found immediately after the procedure. However, before giving you his final decision, he needs time to study the results and talk with the other cardiologists and/or surgeons. The results of the catheterization may show that your child needs to continue being followed by the cardiologists or referred to the cardiac surgeons for an operation.



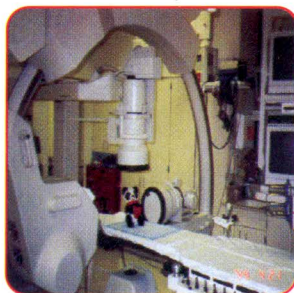
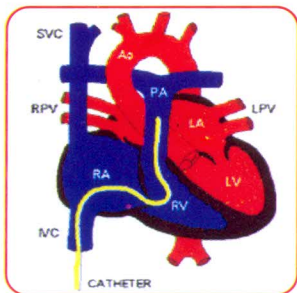


### What happens after the cath?

Immediately after the catheterization, you will rejoin your child. You will be asked to hold the child's leg(s) straight for 4-6 hrs. Most children are also under the effect of the sedative for that length of time. Children who have received general anesthesia go to the Recovery Room for a short time. Your child will need to stay in bed for several hours. An upset stomach or slight fever is common after the procedure, but these symptoms usually disappear in a few hours. Once the child is fully awake he/she would be allowed to eat and drink. After several hours, the large bandage is removed and a small band-aid is applied.

If the doctor has written special orders for your child, the nurse will explain them to you. Typically, your child will be discharged from the hospital either the same or the next day and usually can resume normal activities. For infants, the band-aid can be changed as needed when diapers are soiled.

We realize the information obtained from the catheterization is often difficult to understand. If you have questions or concerns after you return home, please let us know. Members of our staff will be glad to talk with you by phone or make an appointment to see you.



Name of Child----- MR #-----

Date of Admission ----- Time to report to the admission office -----

Expected date and time of procedure -----

Nil by mouth since ----- on -----

Signature & name of the Nurse ----- Signature & Name of the Doctor-----

Date and time ----- Date and time -----