

Name of Child: _____ Date: _____

Cardiac Catheterization

Your child's heart doctor (**cardiologist**) wants your child to have a **cardiac catheterization**. This is done either as

1. A test. This test gives much more information than an EKG (**electrocardiogram**) or ultrasound (**echocardiogram**), or
2. A treatment. With some heart problems, it may be used to treat the problem.

What is cardiac catheterization?

Cardiac catheterization, as a test, tells your doctor a lot about your child's heart. During this test, a tube (**catheter**) is put in your child's blood vessels and guided into the heart (**cardiac**). Using this tube and an x-ray machine, your child's doctor can learn much about your child's heart.

This test can tell your doctor:

- how well the heart muscle is pumping
- how well blood is moving through your child's heart
- if there are narrow vessels, thick muscles, holes, or other problems with the heart
- how well the heart valves are working.

A cardiac catheterization may be used to give your child's doctor information that will be used to plan for surgery to treat a heart problem. Cardiac catheterization done as a test is also called **diagnostic catheterization**.

With some heart problems, a cardiac catheterization can be used for both test and the treatment. It can open narrow valves and blood vessels, or fix blood vessels or holes in the heart. Cardiac catheterization used as a treatment is also called **interventional catheterization**.

Your child's doctor will tell you why your child needs this test, and what the risks are.

A team of doctors, nurses, and technicians do the cardiac catheterization in a special x-ray room. The test may take 2 to 4 hours to complete. Someone from the team will talk to you during the test, to tell you how it is going.

Before the procedure

- If your child is old enough to understand, explain to your child what will happen. Do this when you think the time is right. Children do best when they are told what they will see, feel and hear during the test.
- Before the cardiac catheterization your child may have some tests, such as a chest x-ray, lung scan, and blood draw.
- Your child should take a bath the night before and the morning of the test.
- The doctor who will put your child to sleep during the test (anesthesiologist) will talk to you before it is done.
- Your child needs to have an empty stomach during the test. This makes it less likely for your child to throw up during or after the test.

Your child should not eat anything after:

Day _____ Date _____ Time _____

Your child should not drink anything after:

Day _____ Date _____ Time _____

yes no If your child takes medicine, give it, as usual, on the day of the test.

- Before the test, your child will put on a hospital gown.
- Tell the doctor or nurse if your child is allergic to shrimp, scallops, other shellfish, iodine, or the dyes used in diagnostic tests.

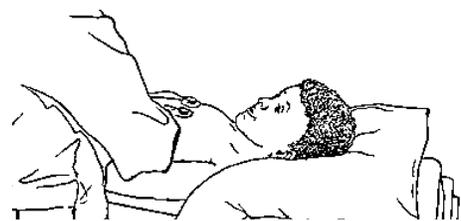
- Your child's doctor will tell you why your child needs a cardiac catheterization. If you don't understand, ask.
- You need to give permission to let the doctor do the test on your child. The doctor or nurse will ask you to sign a consent form.
- You will also be asked to sign a consent form for a blood transfusion. Most children do not need a transfusion, but the doctor wants to be ready, just in case your child needs one.
- If your child gets a fever, flu, or cold 1 to 3 days before the test, call the doctor.



Your child's doctor will tell you why your child needs a cardiac catheterization. If you don't understand, ask.

During the procedure

- Your child will be taken to the special x-ray room.
- You will be taken to the waiting room. To prevent infection during the test, you and your family can not be in the x-ray room with the child.
- A nurse will stay with your child through the whole exam.
- The doctor and nurses wear gowns, gloves, masks, and glasses during the exam.
- Your child will lie on the padded x-ray table.
- Your child's heart rate, breathing, blood pressure, and oxygen need will be watched very closely. The nurse will put a blood pressure cuff on your child. Electrodes for an electrocardiogram will be attached to your child's chest.



Electrodes for an electrocardiogram will be attached to your child's chest.

yes no See the handout, **ECG, EKG, Electrocardiogram, #511.**

- Once asleep, an IV (**intravenous catheter**) will be placed. This IV lets the doctors and nurses give your child medicine and fluids into the vein quickly and easily.

yes no See the handout, **IVs**, #107.

- Your child will be asleep during the test. Your child may need a tube to help him or her breathe. This breathing tube is usually removed after the test, before you see your child.

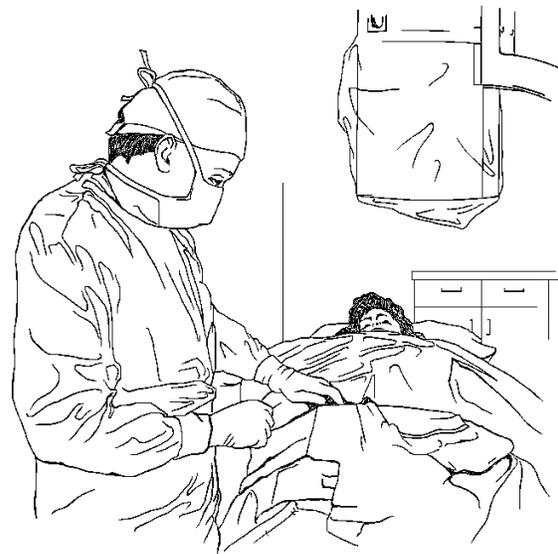
- This test is not painful. Your child will be asleep during the test.

- The spot where the catheter goes in will be cleaned with a special cleaning soap.

- A catheter is a hollow plastic tube about the size of a piece of thin spaghetti. The doctor guides the catheter into the blood vessel directly or through a small nick in the skin. This nick may be in the groin, neck, shoulder or arm.

- This tube is passed into the blood vessel and moved up into and through the heart.

- During this test, x-rays and moving pictures are taken. The x-ray screen shows the blood vessels and helps the doctor guide the catheter through the heart. Small amounts of x-rays are used, so they will not hurt your child.



A catheter is a hollow plastic tube about the size of a piece of thin spaghetti.

- A medicine, called **contrast dye**, is put through the IV to make the x-ray picture more clear. The doctor may take blood samples and measure how strongly the blood is being pushed through the heart and vessels (**pressures**).

- If the doctor needs to open narrow valves and blood vessels, or fix blood vessels or holes in the heart, he or she does it at this point.

- After the test, the doctor takes out the catheter, and puts a bandage on the site. There is only a small nick in the skin, and your child does not need stitches.

After the procedure

- After the test, your child needs to lie quietly. A nurse will carefully watch your child for up to six hours. Your child's pulse and blood pressure will be checked often. The site where the catheter was put in will be checked often to see if there is any bleeding.
 - Sometimes, the medicine that helps your child sleep may make your child feel like throwing up after the test. Your child will get fluids by IV until he or she is able to drink.
 - After the test, some children are awake and some may be sleepy for the rest of the day. Every child is different. If sleepy, your child could choke when eating. Watch your child closely.
 - When your child is awake, the nurse will give him or her something to drink.
 - The site may have a bruise, and may feel a little sore. If your child is uncomfortable, tell the nurse. Medicine like acetaminophen (Tylenol) may make your child more comfortable.
- yes no Your child can go home when he or she is awake enough to drink clear fluids and keep them down. Your nurse will tell you how to care for your child at home. If there is something you don't understand, ask questions.
- yes no See the handout, **Home Care After Sedation, #43.**
- yes no Your child will spend the night in the hospital after the cardiac catheterization.
- If there is no bleeding from the site after several hours, your child may be allowed to sit up and play. For the next 2 days (your doctor may say longer) your child should not ride a bicycle, jump rope, go swimming, or take a bath.
- yes no After the test, your child needs to take a medicine to prevent blood clots from forming.

yes no After the test, your child needs to take a medicine to prevent infection (**antibiotic**).

- For the first 48 hours after the cardiac catheterization, you may wash your child in bed with a wash cloth.

- The catheter site needs to heal completely before your child can take a bath in a tub or goes swimming. This usually takes about 48 hours.



If there is no bleeding from the site after several hours, your child may be allowed to sit up and play.

When will I learn the results?

- After the test, the doctor will see you in the waiting area. The doctor will tell you how the exam went.

- It may take several days to get the results for some tests. It may take a week before all the results are back, all the doctors get to look at them, and they decide what would be the best treatment for your child.

- Ask your child's doctor when you can expect to hear the results.

When to call the doctor

Cardiac catheterizations are done often, and, in general, most problems are rare and minor. The risk for your child depends on the type of heart problem and the age of your child.

- If the bandage gets a spot of blood, have your child sit down and rest quietly. After an hour, your child may get up and move again. If no more blood forms on the bandage, your child may play as usual.

- If blood drips or spurts from the site, have your child lie down on his or her back. Put your hand, a gauze pad, or a clean wash cloth on the site, and press down for 10 to 15 minutes. After the bleeding has stopped, have your child lie flat for an hour.



After the bleeding stops, call your doctor's office. Tell the doctor that the site bled. Then your child may get up and play quietly if the doctor says it is OK. If the bleeding doesn't stop, call your doctor's office.

Call your child's doctor if

- the site becomes red, swollen, warm, painful, oozes pus
- your child's leg or arm becomes cold, numb, or painful
- your child gets a fever over 100.5 degrees F.
- your child has chills, or a cough
- your child does not return to his or her usual behavior



- If you have any questions or concerns,
- call your child's heart doctor (cardiologist)
 - or call _____

Now that you've read this:

- Tell your nurse or doctor why the doctor wants your child to have a cardiac catheterization. (Check when done.)
- Tell your nurse or doctor how you will get your child ready for the cardiac catheterization. (Check when done.)

If you want to know more about child health and illness,
visit our library at The Emily Center at Phoenix Children's Hospital

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Phoenix, AZ 85016

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866-933-6459

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Disclaimer

The information provided at this site is intended to be general information, and is provided for educational purposes only. It is not intended to take the place of examination, treatment, or consultation with a physician. Phoenix Children's Hospital urges you to contact your physician with any questions you may have about a medical condition.

Thursday, April 24, 2014 • DRAFT to family review
#512 • Written by Sharon Pfeiffer, RN • Illustrated by Dennis Swain and Irene Takamizu

Cardiac Catheterization

Name of Health Care Provider: _____

Date returned: _____ db

Family Review of Handout

Health care providers: Please teach families with this handout.

Families: Please let us know what you think of this handout.

Would you say this handout is hard to read? Yes No

easy to read? Yes No

Please circle the parts of the handout that were hard to understand.

Would you say this handout is interesting to read? Yes No

Why or why not?

Would you do anything differently after reading
this handout? Yes No

If yes, what?

After reading this handout, do you have any
questions about the subject? Yes No

If yes, what?

Is there anything you don't like about the drawings?

Yes

No

If yes, what?

What changes would you make in this handout to make it better or easier to understand?

Please return your review of this handout to your nurse or doctor or send it to the address below.

The Emily Center
Health Education Specialist
Phoenix Children's Hospital
1919 East Thomas Road
Phoenix, AZ 85016-7710

602-933-1395

Thank you for helping us!