

ECHOCARDIOGRAM (ECHO)

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this test, and we invite you to participate. Please read the following information to learn about the test and how you can help.

Fast Facts About the Echocardiogram (Echo)

- An echocardiogram (*ECK-o-KAR-dee-o-gram*) provides a computerized picture of the heart in action.
- It gives doctors valuable information about the physical structure of the heart and how well it is working.
- It does not hurt, but there can be some mild discomfort from the wand placed on your child's chest area.
- A sonographer (*sun-OG-ruff-er*) who has been specially trained to take sound wave pictures of children's hearts will do your child's echocardiogram.
- All testing takes place on the outside of the body.
- The test takes about 30–60 minutes to complete.
- Parents can stay in the room with their child during the entire test.

What Is An Echo?

An echo is a moving picture of your child's heart in action. An echo uses high frequency sound waves, sometimes called ultrasound, that echo or "bounce" off the heart to create pictures of the beating heart on a television screen and record them. This test is non-invasive, meaning that the test is done on the outside of the body and does not cause pain. Children do sometimes feel uncomfortable when the wand is placed on their chest.

An echo can detect many heart conditions, such as:

- Problems in the structure of your child's heart that were present at birth;
- Weakness, thickening or enlargement of the heart muscle that might be caused by heart disease;
- Weaknesses called aneurysms (*AN-yur-isms*) in the aorta (*ay-OR-tuh*), the large artery that carries oxygen-rich blood out of the heart to the rest of the body; and
- Flaws in one or more of the heart's four valves.

Home Preparation

- Your child may eat and drink as usual.
- You should not use any cream, lotion, powder or baby oil on your child's chest on the day of the test.
- If your child is an infant or toddler, please do not dress him or her in a "onesie" or one-piece undershirt on the day of the test.



- You may bring along a "comfort" item—such as a favorite stuffed animal or "blankie"—for your child to hold during the test.
- If your child has a favorite video or DVD, you may bring it with you so he or she can watch it while the Echo is being done.

The Test

An echo may be done in a cardiology doctor's office, in the hospital, or in one of the ambulatory care centers. You and your child will be taken into a small, darkened room. You may stay with your child during the entire test. Your child may hold a comfort item, and may watch or listen to a favorite video, during the test.

- Your child will be asked to remove his or her shirt. Older children will be given a gown to wear for privacy.
- Your child will be asked to lie down on a table or bed, and you may stand or sit right next to him or her.
- To begin the test, three small stickers called electrodes (*e-LECK-trodes*) will be placed on your child's chest. Wires will then be attached to the electrodes and connected to the echo machine. These stickers and wires will not hurt.
- The sonographer will place gel on your child's chest and then place the sound wave wand on the gel. This wand has a square end that will not hurt your child, but he or she will feel some pressure on the chest as the sonographer moves the wand to get the needed pictures of the heart.



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- During the test, the sonographer will move the wand around and apply different amounts of pressure to get different views of your child's heart. The pressure should not be painful, but if it makes your child uncomfortable, he or she should tell you or the sonographer.
- The sonographer may ask your child to lie on his or her side or back, or to change position, during the test.
- To get the clearest pictures possible, it is important for your child to stay calm and still during the test. Having parents nearby is usually comforting enough for children to relax during the test.
- The test may take 30 to 60 minutes to complete, depending on how many pictures the doctor needs of your child's heart.
- When the test is over, the sonographer will wipe the gel off and remove the wires and electrodes from your child's chest.
- The sonographer does not give any results to the family; your doctor will review the results of the test and give you the information.

When Medication Is Needed

Younger children may become restless during the test. Because movement during the test can give poor pictures and make the test take longer, children who become restless may be given a mild medication to make them relax before or during the test.

- The medication is given in the form of nose drops. Soon after the drops, your child will become a little drowsy, which will make the test easier for him or her and give clearer pictures of the heart.
- If medication is given, a nurse will check on your child during the procedure. For safety reasons, you must stay at the Echo clinic after the test until your child is fully awake and the medication has worn off.

A Parent's/Guardian's Role During the Test

The most important thing parents can do is to keep their child calm and still during this test.

- Parents may stay with their child to provide a reassuring touch and words of encouragement throughout the entire test.
- The assistant will show you where to sit or stand in the Echo room during the test.
- We welcome your questions—but please ask them before or after the test.

After the Test

When the assistant gets all the needed pictures of the heart, a doctor or a team of doctors will look at the recording of the pictures.

- You may be asked to wait while a doctor reviews the test.
- The doctor who ordered the test for your child will receive a report on the results of the test within 2 days. Results may not be available until then.
- You should follow up with the doctor who ordered the test if you have any further questions.

Special Needs

If your child has any special needs or health issues you feel the doctor needs to know about, please call the Heart Institute at Children's Hospital of Pittsburgh *before the test* and ask to speak with a nurse. It is important to notify us in advance about any special needs your child might have.

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One Children's Hospital Drive
4401 Penn Ave.
Pittsburgh, PA 15224
412-692-5540

Children's North
2599 Wexford-Bayne Road
Sewickley, PA 15143

Children's South
205 Millers Run Road
Bridgeville, PA 15017

To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.

