



Echocardiogram (Echo)

An echocardiogram also called an “echo,” uses high-frequency sound waves (ultrasound) to take moving pictures of your heart.

Why is an echo done?

An echo can be used to show:

- The size and shape of your heart.
- If there is a tumor or infection near your heart.
- How well the chambers and valves in your heart are working.
- Areas of decreased blood flow or injury in your heart.
- Blood clots inside the heart, extra fluid in the heart, and problems with the aorta (the main artery in your heart).
- Heart problems in infants and children.

Who needs an echo?

Your provider may ask you to get an echocardiogram if you are having signs or symptoms of a heart problem. Signs and symptoms of a heart problem could be:

- Shortness of breath.
- Chest pain or tightness.
- Swelling in your legs.
- High blood pressure.
- Heart murmur (abnormal heart sounds).

Your provider may also ask you to get an echo to see how your heart is reacting to certain heart medications, or before you start certain cancer treatments. This is to make sure your heart is healthy.

What are the types of echo tests?

The types of echo tests are:

- **Transthoracic Echo:** The most common type of echo. The technician places a small handheld tool called a transducer (like a wand) on your chest and moves it around. A lubricating gel may be used. The transducer sends painless soundwaves through your chest to your heart. As these ultrasound waves bounce off your heart, an image is created on the screen. Some testing machines can create 3D images during this type of echo.
- **Transesophageal Echo (TEE):** If your provider is having a hard time seeing parts of your heart with a transthoracic echo, you may get a transesophageal echo. During a TEE, the transducer is attached to a flexible tube. Your provider will guide the tube down your throat and into your esophagus. You may be given a medication to help you relax, as well as numbing spray or gel to make your throat numb. You

will be awake enough to swallow if needed. Some testing machines can create 3D images during this type of echo.

- **Stress Echo:** During a stress test, you will be asked to exercise so that your heart beats faster and works harder. If you are unable to exercise, you may be given medication to make your heart beat faster. A transthoracic echo will be done just before you exercise or take the medication, and again just after you exercise or take the medication. Your provider will compare the images of your heart, so they can see how your heart acts under stress.

This article will focus on what to expect before, during, and after a transthoracic echo, as this is the most common type.

How do I get ready for the test?

The echo may be done in your provider's office or in the hospital. For a transthoracic echo, there is nothing special to do before the test. You can eat and drink as normal before the echo. Ask your provider if you should take your normal medications before the test.

What should I expect during the test?

The echo itself takes about an hour. You will lie on a table or bed on your side. The room will be dark so that the technician can see the computer screen. You may have EKG (electrocardiogram) electrodes placed on your chest. Electrodes are stickers that are attached to wires that connect to an EKG machine. The EKG machine keeps track of how fast your heart beats. The technician will put gel on your chest or on the transducer, which helps the sound waves pass through your skin. To get the best pictures of your heart, you may be asked to hold your breath or move positions, and the technician may need to press firmly on the transducer. Let the technician know if you are uncomfortable. The moving pictures of your heart show up on the screen and can be saved for your provider to look at later.

What should I expect after the test?

The technician will help clean off any leftover gel on your chest. The EKG electrodes will be removed. Your provider will get a copy of the images. You can often go back to normal activities after an echo. Ask your provider if it is safe for you to do so.

What are the risks of an echo?

There are no risks or side effects from a transthoracic echocardiogram. There is no radiation used during this test. If your provider has ordered an echocardiogram for you, be sure to ask why this test is being ordered and what other tests might be needed. Ask your provider any questions you have about getting an echocardiogram.

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