

Transthoracic Echocardiogram (TTE)

An Echocardiogram (echo) is a test that uses sound waves to look at the heart.

A small device, called a **transducer**, is held against the chest. This sends sound waves that bounce off the heart.

A computer uses the data from the transducer to create a picture of the heart. The picture is shown on a TV screen. The pictures of your heart are saved in your record.

It gives information about the heart's structure and blood flow without anything being put into the body.

It is very safe. There are no known risks from the sound waves. The test is painless. There may be pressure when the transducer is held against your chest. In some people it can be hard to get clear pictures, pushing a little harder helps to get better ones.

Echo Test

The echo test gives doctors useful information about your heart:

- **Size** - it is used to measure the size of the heart chambers and thickness of the heart muscle.
- **Strength** - it shows whether the heart is pumping at full strength or not.
- **Valve problems** - it shows the shape and motion of the heart valves. It can help tell if a valve is narrowed or leaking.

It is also used to see if there is fluid around the heart, blood clots, other problems inside the heart, or holes between heart chambers.

Getting Ready

There are no special instructions to get ready for this test. You may eat, take medicines and do your normal routines, unless you are told not to. Wear a two-piece outfit such as a shirt with pants or shorts. When the test is over, you may eat and return to your normal routine.

The echo may be done at the hospital or clinic. The exam can take 30 to 45 minutes. This depends on the number of pictures that are needed. Be sure to allow extra time to check in.

During the Echo

You will need to undress from the waist up and put on a gown. Electrodes (small sticky patches) are placed on your chest and shoulders to record your heartbeat. The room will be dark, so we can see the screen.

You will lie on an exam table. A clear gel is applied to the area where the transducer will be placed. This may feel cool and a bit moist. The gel will be wiped off at the end of the test.

The transducer is moved over the chest to get many views of the heart. We may ask you to change your position. Air in your lungs can affect the pictures. We may ask you to breathe a certain way for a few seconds. You may hear a whooshing sound which is the blood flowing in your heart.

Bubble Study

We may do a bubble study during the echo. It lets the doctor learn more about how blood flows through your heart, and your risk for stroke. For the study, a small amount of air is injected into the IV. You will not feel any different. You will be asked to

“bear down” as if having a bowel movement (without emptying bowels) during the test. We will let you know when and how to do this. Not every echo needs a bubble study.

Contrast

Some people will need contrast to see the heart better. We use an IV to give you the contrast. A small tube in your vein with a needle for the contrast. The IV may be taken out at the end of the echo if you are going home. The contrast is made of tiny gas bubbles in a liquid. You will breathe out the gas to remove it from your body. It leaves your body in about 30 minutes.

Results

If a doctor is present during the test, you may be able to get the results before you leave. Your own doctor will discuss the test results with you during a future clinic visit. The results of the echo test will help your doctor know how your heart is working and help come up with a plan that is best for you.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 9/2022 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#6849.