

Transthoracic Echocardiogram (TTE)

A transthoracic echocardiogram (TTE) is a test that uses sound waves to look at the heart. This test shows the heart's structure and blood flow without anything being put into the body.

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.

The test is very safe and painless. There are no known risks from the sound waves.

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 told not to. Wear a two-piece outfit such as a shirt with pants or shorts.

The echo may be done at the hospital or clinic. Give yourself extra time to park and check in.

During the Echo

The exam can take 60 to 70 minutes. This depends on the number of pictures that are needed.

You will remove any clothes from the waist up, then put on a gown. We will place electrodes (small sticky patches) on your chest and shoulders. They record your heartbeat. The room will be dark, so we can see the screen.

You will lie on an exam table. The technologist will apply a clear gel to your chest. The gel may feel cool and moist. It will be wiped off at the end of the test.

The transducer is moved over the chest to get many views of the heart. Air in your lungs can affect the pictures. You may be asked to change your position or 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 exam. 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 different. You will be asked to "bear down" as if having a bowel movement (without emptying bowels). We will let you know when and how to do this. Not every echo needs a bubble study.

Ultrasound Enhancement Agent (UEA)

You may need a ultrasound enhancement agent (UEA) to see the heart better. To give you the UEA, we will put an IV (a small tube with needle) in your vein. The IV may be taken out at the end of the echo, if you are going home. The UEA 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

The results help your doctor know how your heart is working and decide the best plan for you. Your doctor will contact you to discuss the test results. If you have not heard from your doctor in 7-10 business days, please call the clinic.

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 © 11/2025 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#6849.