

Transthoracic Echocardiogram



A transthoracic echocardiogram is an ultrasound scan of the heart. It is often called an echocardiogram or “echo”.

The test uses sound waves to create moving pictures of your heart. It allows the cardiologist to assess the size, structure and function of your heart.

During the test, you will lie on an examination bed. A small ultrasound probe with gel is placed on your chest to take pictures of the heart from different positions. You may be asked to change position or briefly hold your breath so clearer images can be obtained.

The test is painless and does not involve radiation.

What the Test Can Show

An echocardiogram can assess how strongly the heart pumps, the size and thickness of the heart chambers, and how well the heart valves open and close.

It can also detect valve narrowing or leakage, fluid around the heart, pressure changes in the heart and lungs, and some causes of breathlessness, chest discomfort, murmurs, palpitations or leg swelling.

In some patients, advanced measurements called strain imaging may also be performed. These include global longitudinal strain (GLS), left atrial strain and right ventricular strain. Strain imaging can detect subtle changes in heart muscle function that may not be obvious on standard measurements. This can be useful in conditions such as heart failure, valve disease, pulmonary hypertension and monitoring the heart during or after cancer treatment.

What the Test Cannot Always Show

An echocardiogram does not directly show the coronary arteries and does not measure the percentage of narrowing in the heart arteries.

If this information is needed, your doctor may recommend another test, such as CT coronary angiography, stress testing or invasive coronary angiography.

Image quality can vary between patients. Body shape, lung disease and the position of the heart can sometimes make imaging more difficult.

Before the Test

No special preparation is usually required. You can eat and drink normally and take your usual medications unless your doctor has advised otherwise.

Please wear clothing that can be easily removed from the upper body. You may be asked to change into a gown.

Risks

A transthoracic echocardiogram is very safe. It does not use radiation and has no known serious risks.

Some patients may feel mild pressure from the ultrasound probe on the chest, but this usually settles immediately after the test.