



What is Echocardiography?

Echocardiography often referred to as cardiac echo or echocardiogram, is an ultrasound of the heart. It is not abbreviated as ECG, which in medicine usually refers to an electrocardiogram.



Gel is applied to the skin that acts as a conductor of sound and prevents air from getting in between the skin and the probe. The probe is a small device that acts as a microphone. As the Cardiovascular Imaging Specialist moves the probe, sound waves are sent through the skin. When the waves bounce off certain structures, echoes are produced and then picked up by the probe. The echoes are converted into images by the computer, which are viewed on a computer screen in real time by the Cardiovascular Imaging Specialist.

Not only can echocardiography create ultrasound images of heart structures, but it can also produce accurate assessment of the blood flow through the heart, using pulsed or continuous wave

Doppler ultrasound. This allows assessment of both normal and abnormal blood flow through the heart.

Echocardiography can provide a wealth of helpful information, including:

- **Heart size and shape** – Heart chambers size quantification (Right and left side atria and ventricles)
- **Heart Function (Pumping strength and capacity)** - Specific measurements may include the percentage of blood that's pumped out of a filled ventricle with each heartbeat (ejection fraction) or the volume of blood pumped by the heart in one minute (cardiac output)
- **Damage to the heart muscle** - During an echocardiogram, your Clinician can determine whether all parts of the heart wall are contributing normally to your heart's pumping activity (wall motion). Parts that move weakly or don't move at all may have been damaged during a heart attack or be receiving too little oxygen. This may indicate coronary artery disease or various other conditions
- **Valve problems** - An echocardiogram shows how your heart valves move as your heart beats. Your Clinician can determine if the valves open wide enough for adequate blood flow (valve stenosis) or close fully to prevent blood leakage (valve regurgitation)
- **Heart defects** - Many heart defects can be detected with an echocardiogram, including abnormal connections within

the heart chambers, abnormal connections between the heart and major blood vessels, and complex heart defects that are present at birth

- **Heart wall** - By assessing the thickness of the heart wall, echocardiography can help detect the presence of chambers hypertrophy in patients with hypertension or in patients with cardiomyopathies
- **Great Vessels** - especially the ascending aorta diseases like aneurysms and dissection

What does an Echocardiography scanner look like?

An Echocardiography scanner looks like a regular ultrasound machine used for scanning unborn babies during pregnancy. The latest portable units resemble a laptop.

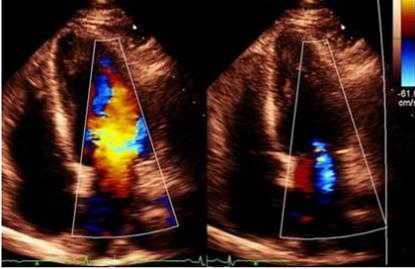


IS Echocardiography Safe?

Echocardiography is a non-invasive study that uses ultrasound waves to produce images of the heart, without any known risks or side effects. It is a safe and effective way to assess the structure and function of the heart chambers (ventricles and



atria), pumping capacity of the heart, heart valves and great vessels (aorta).



Who should have an Echocardiography scan?

Echocardiography is one of the most widely used diagnostic studies in the diagnosis, management, and follow-up of patients with any suspected or known heart diseases.

The symptoms that lead Clinicians to request Echocardiography include:

- Chest pain or discomfort
- Shortness of breath
- Palpitations
- Abnormal heart beats (skipping beats)
- Syncope or fainting
- Weakness or fatigue
- Dizziness or feeling light-headed

How do I prepare for my scan?

No specific preparation is required prior to the study.

Please bring the following on the day of the appointment:

1. Current list of medications and their respective dosages

2. Request form from your Clinician
3. Medical history report
4. Previous diagnostic reports/ results and tests such as: ECG, Treadmill, Stress test, previous echocardiography etc.
5. Surgical report if any (heart operation such as bypass or valve replacement)
6. Laboratory results

How long will the scan take?

Echocardiography is usually completed within 30 minutes.

What can I expect during my scan?

At **Allied Medical Center**, Echocardiography is performed by a qualified, experienced **Cardiovascular Imaging Specialist**. A female nurse will be present during the examination for all female patients.

You will be seen by our Cardiovascular Imaging Specialist who will assess your general and heart health. Our cardiac nurse will monitor your heart rate and blood pressure.

You will be collected by the attending Cardiovascular Imaging Specialist or cardiac nurse and will be asked to change into a comfortable gown. The Cardiovascular Imaging Specialist or cardiac nurse will position you on the examination table in a comfortable position. You will be asked to lie on your left side during the study. Electrodes will be placed on your limbs. Leads will be

attached to the electrodes to allow your heart rhythm to be monitored.

A probe with gel will be placed on your chest and moved around to allow the **Cardiovascular Imaging Specialist** to view the heart from different angles.

Images of the heart will also be obtained from areas near the stomach and under the chin. You may be asked to breathe in or out, hold your breath or to move slightly during the study.

What happens after my scan?

You may eat and drink as usual and return to your normal daily routine straightaway.

When will I get my results?

We strive to complete reports within 24-48hours and a written report will be sent to your referring Clinician upon completion. You will be asked to wait a few minutes while we burn your images on a CD which will be given to you to take back to your Clinician at your follow-up appointment. Your Clinician will discuss the findings with you.

Any other questions?

If you have any other questions, worries or doubts do not hesitate to ask one of our staff.

We want you to feel as comfortable as possible.