

# Transthoracic Echocardiogram

## What is an echocardiogram?

The Echocardiogram is a sophisticated cardiac investigation that takes approximately 15-30 minutes to acquire. The patient must be reclined and relaxed so that the amplified ECG signal can be used as well as ultrasound images of the beating heart.

A simple or screening Echocardiogram- will suffice for most healthy people, whereas a full Doppler Echocardiogram also looks at valve function, flow and the velocity of blood through the heart structures, and is needed to evaluate valve function, heart murmurs or to investigate symptoms such as breathlessness and angina.



Three electrodes are connected to the chest. An experienced Echo Technologist or Cardiologist will then examine the heart structures using a beam of ultrasound. This allows the heart chambers, valves and function to be examined in enormous detail. An Echocardiogram does not involve x-rays or ionising radiation and is painless. It is the standard method for examining the function of the heart and can pick up abnormalities that cannot be detected by the ECG alone.

## What are the common uses of the procedure?

An Echocardiogram can be used in the evaluation of a variety of complaints and conditions.

- It may help in the evaluation of chest pain and breathlessness
- It helps a physician determine the function of the heart and its valves- and presence of disorders such as aortic stenosis and mitral regurgitation
- It may help to identify unsuspected heart problems such as cardiomyopathy and coronary heart disease
- It may reveal serious and potentially life threatening disorders such as hypertrophic cardiomyopathy.
- It helps in identifying past problems such as heart attacks which are not always apparent to a patient.

### **How should I prepare for the examination?**

The Echocardiogram can be taken after Tea, coffee and alcohol as well as all medication- so no preparation is needed- other than to wear suitable clothing - since you will be asked to strip to the waist to allow the electrodes to be attached across the chest. Avoid applying skin creams and oils to your skin on the day of the test since these will reduce electrical conductivity and may hamper the signal.

### **What will I experience during the examination**

The Echo technologist will invite you into the Echo room, which is darkened to improve image acquisition, where you will need to strip to the waist, and recline while three electrodes are connected across the chest. Your details will then be entered onto the computer and a recording taken. You may be asked to move into various positions eg left lateral position, to enable different views to be acquired. Digital movie clips of each view of your heart are stored onto the computer and archived. The tracing is then analysed by the Echo Technologist who will issue a report - which is sent to an experienced Cardiologist who will interpret the test in context since he/she is informed about you- including whether you have any symptoms or are taking any medication. A screening Echocardiogram usually takes 10-15 minutes whereas a full examination takes 20-30 minutes and will require additional Doppler spectral waveform analysis

### **How will I get the results**

Although the Echocardiogram and its report will be available minutes after the test, its main value is how this is interpreted by the Cardiologist *in context*. For example small changes in the thickness of one part of the heart may be terrifically important if there is a family history of collapse or sudden death or if the blood pressure is raised, so the true power of the investigation can only be realized when interpreted by an experienced Cardiologist who has been made aware of your history, any medical conditions, medication and whether you have symptoms.

Once these data are collected and presented to the Cardiologist, a report will be issued - and sent to your GP. If you have requested it, a copy can also be sent to you electronically, so that you or your physician can view it any time in the future.

***HeartScreen Silver***  ***consists of a Nurse questionnaire, a 12 lead electrocardiogram, a screening Echocardiogram and a Cardiologist report- all of which will be sent to the patient- since this examination can be requested without a GP referral***