

Patient Information on General Ultrasound

1. What is an Ultrasound?

“Ultrasound” is the term used for high frequency sound waves. An ultrasound examination uses these sound waves to produce an image of the inside of the body and this is displayed on an ultrasound machine screen.

An ultrasound examination is performed by highly trained health professionals called Sonographers. Cardiac Sonographers specialise in Echocardiography (ultrasound of the heart) and a Vascular Sonographers specialise in Vascular ultrasound. The examination involves using a smooth hand held device called a transducer that is moved across the body or region of interest. The transducer requires some aqueous gel to “see” into the body tissue, this gel is placed directly on the skin. The transducer transmits the high-frequency sound waves into your body. The sound waves are then reflected from the different tissues within your body. The sound waves are then converted into electrical impulses, which are used to produce a moving image onto the screen. The scan is often done with dimmed lights to ensure the sonographer can see the images clearly on the screen.

An ultrasound examination is a safe modality and has many advantages. There is no radiation, it is not painful and it is non-invasive. The high-frequency sound waves ensure the information is of very high detail, capable of looking at the different organs of the body and the blood vessels supplying them. Imaging can be performed on all age groups, including the elderly, children and babies (please advise at time of booking if the ultrasound is to be done on a child under the age 5yrs).

2. Why am I having an Ultrasound?

An ultrasound examination could be requested for many reasons. You will be most familiar with its use in obstetrics (medical care during pregnancy and childbirth), however we specialize in imaging of the heart and the vasculature of the body, including imaging of varicose veins, abdominal scans, carotid artery scans and echo stress testing. Ultrasound is a useful tool for measuring the structure and function of the organ of interest, as well as utilising Doppler which is a method of measuring blood flow, pressure and velocity. During the ultrasound procedure the machine will produce different noises which are normal and are known as Doppler signals. These noises are a measure of the blood flow and velocities. Colour Doppler ultrasound can be used to watch blood flow in any of the arteries or veins throughout the various parts of your body.

3. How do I prepare for an Ultrasound?

This will depend on the type of ultrasound examination that your referring doctor has requested. Please refer to the other side of this patient pamphlet to review a comprehensive list of test preparation requirements.

4. What happens during an Ultrasound?

When arriving for your ultrasound scan, you will be required to complete a health questionnaire which will be used to gather information for the scan. In the testing room the technician will explain the procedure you are having and answer any questions you have before they start the examination. You will be asked to lie down on the bed or to sit on the bed, depending on the type of scan you are having performed. The area of the body to be examined

will be exposed while the rest of the body is covered. During an echocardiogram, imaging of the heart requires access to the chest and female patients are required to remove their bra and dress in a gown. Clear gel is applied to the area of your body which is being imaged. The sonographer will then place the transducer onto this area using gentle pressure. The transducer is moved across the area with a sliding and rotating action. The sonographer takes still images from the moving images on the screen.

During the examination you may be asked to perform some simple movements or breathing activities to improve the quality of the imaging. These may include: “Taking a bigger breath” to allow the heart which lies underneath the rib cage to be clearly viewed in the case of echocardiogram.

During a varicose vein scan, light squeezing of the leg is required to assess blood flow direction.

However, if any of these movements cause you concern or discomfort, you should let the sonographer know immediately.

5. Are there any after effects of an Ultrasound?

After most ultrasound examinations, there should not be any after/side effects apart from occasional slight tenderness and redness in the area that has been examined. This is uncommon and rarely persists beyond the first hours after the examination.

During a Stress Dobutamine test, patients are administered a medication called Dobutamine which increases the heart rate. Some patients can experience some minor side effects associated with the medication and should not drive after the test.

6. How long does an Ultrasound take?

Typically, an ultrasound examination will take about 30-60 minutes depending on the type of ultrasound. You will be advised at the time of booking on the approximate length of the scan.

7. What are the risks of an Ultrasound?

Ultrasound is a safe non-invasive examination, it has no radiation and can be performed on all ages. It provides excellent imaging without any significant risk to the patient. There are no proven harmful effects of sound waves at the levels used in ultrasound performed in clinical practices. Ultrasound can be performed on all age groups, so it is ideal for imaging babies and children. Ultrasound is mostly non-invasive, provides accurate imaging tests of the human body, and is readily available and relatively inexpensive.

8. When can I expect the results of my Ultrasound?

All testing results will be received by your referring doctor within a week after having the procedure. If your test is urgent please advise the sonographer completing your scan. If your ultrasound is complex and requires urgent follow up, the results will be delivered to your doctor urgently.

Please feel free to ask our staff when you are having your test or procedure when your doctor is likely to have the written report. It is important that you discuss the results with the doctor who referred you, so that they can explain what the results mean for you.

PROCEDURES AND PATIENT PREPARATION

PROCEDURE	PROCEDURE TIME	PATIENT REQUIREMENTS
ECHO ■ This is an ultrasound of the heart.	1 hr	No testing preparation required. Wear two piece outfit.
STRESS ECHO (TREADMILL) ■ A treadmill stress echo is a combined exercise stress test and an echo (heart ultrasound). The exercise test evaluates the heart's response to physical stress using echo.	1 hr	Fast for minimum of 3 hours. No food or drink. Medication may be taken with water. Wear comfortable clothing, running/ walking shoes. Wear a 2 piece outfit. *Diabetics to fast for only 2 hours prior to test.
STRESS ECHO (DOBUTAMINE) ■ A Dobutamine Stress Echo is a combination of a echo whilst the patient undergoes a drug-induced exercise stress test using dobutamine.	1 hr	Fast for a minimum of 3 hours prior to the test, no food or drink. Medication can be taken with a small amount of water. Do not drive after the test. Please arrange transport home from this procedure. *Diabetics to fast for only 2 hours prior to test.
TRANSOESOPHAGEAL ECHO (TOE) ■ A Transoesophageal Echo is an ultrasound procedure where a probe is placed down your esophagus (food pipe). Medication is administered to make you drowsy and more comfortable. The TOE procedure is performed in a hospital as a day case so you will need to present to hospital admissions at least an hour prior to your appointment time.	1 hr 30 mins (2-3 hours including recovery time)	Fast for a minimum of 6 hours. Medication may be taken with water. Do not drive afterwards so please arrange transport home after this procedure.
ECG ■ An ECG is a tracing of the electrical activity of your heart and is helpful in assessing heart rhythms.	15 minutes	No testing preparation required. Walk in test – no appointment necessary.
EXERCISE STRESS TEST (INCLUDES BASELINE ECG) ■ You will be required to walk on a treadmill initially, the pace is slow and the test often ends with a brisk walk. A treadmill stress test evaluates the heart's response to increased physical demand	45 minutes	Fast for minimum of 3 hours. No food or drink. Medication may be taken with water. Wear comfortable clothing, running/ walking shoes. Wear a 2 piece outfit. *Diabetics to fast for only 2 hours prior to test.
24 HR HOLTER MONITOR ■ You are required to wear the monitor for 24 hours. It is a 24 hour ECG to determine heart rhythm problems causing symptoms. It also may be requested to determine if a patient's heart medication for rhythm control is working effectively.	24 hr test 30 minutes to connect up the monitor and 15 minutes to disconnect.	No swimming or showering for 24 hrs as water will damage the monitoring equipment. Patients are encouraged to conduct normal activity while wearing the monitor
24 HR AMBULATORY BLOOD PRESSURE MONITOR (ABPM) ■ The ABPM will measure your blood pressure intermittently during the day and night. The ABPM provides information on a patients blood pressure and assists with effective blood pressure management.	24 hr test 30 minutes to connect up the monitor and 15 minutes to disconnect.	No swimming or showering for 24 hrs as water will damage the monitoring equipment. Patients are encouraged to conduct normal activity while wearing the monitor.
EVENT MONITOR ■ You are required to wear the monitor for one week. An event monitor records the heart rhythm when the event button is activated. It stores up to 4 minutes of recording and can even be pressed following a blackout episode.	Week long monitor 30 minutes to connect up the monitor and 15 minutes to disconnect the monitor off a patient.	Please wear two piece outfit. You will need to remove the monitor for showering throughout the week as water will damage the monitoring equipment. Patients are encouraged to conduct normal activity while wearing the monitor.
VASCULAR IMAGING ■ Is an non-invasive, very safe form of imaging of the vasculature (arteries or veins) of the body as referred by a medical practitioner.	30mins-1hr	Preparation instructions for vascular ultrasound will be clearly specified at the time of booking. *Diabetic patients whom are required to fast – if blood sugars are low you are able to drink a small amount of tea with sugar or eat a hard boiled sweet prior to having a vascular imaging test.

- Please remember that it is important for you to arrive 10 mins prior to your appointment to complete patient consent forms.
- To confirm your appointment please phone: 1300 887 997.
- Should you have any difficulties with the monitoring equipment please phone: 1300 887 997.
- Bring a list of your current medications.
- All reports will be sent to your referring doctor within a week of your testing appointment.
- Please bring a current referral from your doctor when presenting for your appointment.
- CVS is a private practice and requires payment on the day of your procedure.