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## Ultrasound Clinic

Patient Advice & Education



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heart

# The Ultrasound Clinic

As part of our Complete Care Service, London Medical provides a comprehensive ultrasound service.

## What is ultrasound?

Ultrasound tests are painless and do not routinely involve the use of any needles. Ultrasound technology produces harmless sound waves, which pass from the probe (transducer) through the skin into the tissue. The waves are then reflected back by different tissues (muscle, organs, blood etc) and those reflections produce a picture on the screen. The picture may be black and white or colour. The time of the scan is generally 20 to 30 minutes and you can return to your normal routine after the scan.

## What is Involved?

During the examination you will be lying down on a couch and the main lights in the room will be dimmed. Clothes covering the area to be scanned will be removed. The probe (transducer) is then placed on the skin and using light pressure the probe is moved over the area to be examined. The sonographer will place non-greasy gel on the skin and probe; the gel allows the ultrasound waves to pass from the machine into the tissues.

## Which parts of my body may be examined?

Ultrasound can be used to examine any part of the body. Common requests from your doctor may include:

- Abdomen/Liver/Renal tract /Renal Arteries
- Thyroid or Testes
- Vascular – All major blood vessels can be examined – the carotid arteries (neck), arm or leg arteries, arm or leg veins (varicose veins or DVT)
- Heart – Echocardiography

## What is a Vascular Ultrasound Scan?

This is a specialist examination that assesses the blood flow in the arteries and veins. The test uses 'Doppler' ultrasound and can identify and map, using colour coding, the pattern of blood flow in the vessels. 'Doppler' shows whether the flow is normal or abnormal, how fast and in which direction the blood is flowing. The test can also identify any build up of plaque ('furring up') in the blood vessel and determines the extent and cause of the narrowing or blockage. All this information is recorded and a report is produced giving details of any abnormalities. Vascular ultrasound tests can be carried out on all the major blood vessels of the body. The most common tests are explained below.

## What is a Carotid Colour Duplex (Doppler) Ultrasound Scan?

Carotid Duplex Ultrasound is a test that examines the carotid arteries (blood vessels in the neck that provide blood flow to the brain). It will show whether there is thickening of the wall (early stages of disease), plaque/cholesterol build up or significant narrowing/blockages (later stage of disease). If the arteries are very narrow this could lead to a stroke. Measuring the thickness of the artery wall (intima media thickness) and the size of any plaque allows the observation of any progression or improvement in the wall thickness to be monitored over time.

## What is a Colour Duplex Ultrasound (Doppler) Scan of the leg?

This test looks at the blood vessels in the leg. The sonographer can either look at the blood flow in the veins or the arteries, depending on what test your doctor requests. The ultrasound test will show when flow is abnormal and where the problem is located. In the arteries the problem may be a blockage or narrowing caused by the build up of plaque or thrombosis. In the veins this test can assess the function of valves or check for occlusion (blockages). If the valves are not working correctly this can lead to varicose veins or leg ulcers.

## What is an Echocardiogram?

An Echocardiogram (Echo) is an ultrasound scan of your heart. It allows examination of the structure of the heart, the size of the heart, the motion of the walls and the function of the valves. A stress echocardiogram is another non invasive way of assessing coronary artery reserve through the study of local wall movement abnormalities under a pharmacological stress stimulus.

## Who performs ultrasound?

Specialists trained in carrying out, interpreting and reporting on ultrasound images.

**Vascular Ultrasound** - Vascular Scientist/Sonographer

**Echocardiography** - Cardiac Physiologist/Sonographer

**General Ultrasound** - Radiologist/Sonographer

The ultrasound specialist will examine the area to be investigated and they will obtain and interpret the images. From the findings they will draw conclusions and produce a report. A copy of the report and selected images will be given to the consultant who will advise you of the results and any relevant treatment plan. You may keep a copy of the images and the report.

## Preparing for tests

- Arrive 15 minutes prior to your appointment to register.
- Clothing will be removed to allow examination of arms and legs.
- For Leg Arterial Ultrasound scans (not Leg Veins) fast for 4 hours, this allows the blood vessels in the abdomen to be seen clearly, medication may be taken with a little water.

If you smoke, it is recommended that you do not consume nicotine before your scan as nicotine constricts blood vessels.