

Vascular Ultrasound or Duplex Scans

Vascular ultrasound, (Doppler Exams or Duplex Scans) uses high-frequency sound waves to create images of the blood vessels, that accurately diagnose diseases in arteries and veins. Vascular ultrasound is a non-invasive procedure, high frequency sound waves are transmitted from the ultrasound probe and the reflection of these sound waves produce images of the arteries and veins on the computer screen. The utilization of a Doppler function allows evaluation of the sound waves, as it reflect off blood cells moving within the blood vessels. This analysis of the blood flow patterns in the arteries and veins allows assessment and localization of vascular disease.

Vascular Ultrasound is a good non-invasive technique that doesn't require the use of needles, contrast media (dyes), radiation or anaesthesia used in the assessment of vascular disorders with about a 95% accuracy. Studies have shown there are no harmful side effects of the vascular ultrasound test.

Vascular Ultrasound takes about 30 to 90 minutes to complete and is ideal for assessing for vascular diseases including:

- **Screening** high risk patients.
- Detection and monitoring of **aneurysms**.
- Assessment of narrowing of blood vessels and restriction to blood flow to organs.
- Diagnosis of Deep Vein Thrombosis (**DVT**, clots in the veins).
- Assessment of **Varicose Veins** and sites of incompetent valves.
- Assess success of vascular procedures.
- Monitoring patency of vascular grafts.
- Assessment of arteries to the kidneys or bowel (renal, mesenteric vessels)

Preparation

- Routine paperwork needs to be completed.
- There is no special preparation before the ultrasound test apart from the ones on your abdomen; you may take your usual medications and eat and drink as you normally would, but plan to arrive about 15 minutes early for your scan.
- You may be asked to remove jewellery and perhaps change into an examination gown.
- Patients having abdominal scans are asked to fast for about 6 hours prior to the scan, essential medication can be taken and diabetic patients should have a light early breakfast at around 6:00AM with regular medications.
- Avoid creams and gels for leg scans.

The Ultrasound Scan

The ultrasound test is performed and reported by specially trained and qualified vascular technologists and interpreted and signed off by a vascular surgeon. You will be asked to lie on a special examination table during the test. A water-soluble gel is applied to the skin over the area to be examined. The gel is non-toxic and does not stain.

The ultrasound probe or transducer is placed over the area to be examined. The transducer the images are seen and recorded on the ultrasound screen. The transducer is held in place until the blood flow information has been recorded. The sound of blood flow in the vessel may be heard.

At some point in the test the sonographer may need to apply gentle pressure to your arms, leg, or abdomen and this may be sometimes associated with minor discomfort.

After the Ultrasound

The gel will be wiped off your skin and you are now free to get dressed. The sonographer may be able to give you some information but is not able to give you the final interpretation of the results. Be sure to confirm your follow up appointment with the practice manager prior to leaving.