

Vascular Ultrasound Testing

Vascular ultrasound testing is an important tool used in the diagnosis and detection of problems related to blood vessels. Ultrasound uses sound wave frequencies that can be converted into pictures. The ultrasound procedure does not require the use of needles, dyes, radiation or sedatives.

Types of ultrasound examinations

The type of ultrasound examination you have depends on which veins need to be studied and where in your body they're located.

- Carotid duplex ultrasound is used to evaluate the carotid arteries located in the neck that provide blood flow to the brain.
- Venous duplex ultrasound is used to evaluate the veins that carry blood from the legs or arms to the heart.
- Arterial duplex ultrasound is used to evaluate the arteries that provide blood flow to the arms and legs.
- Arterial pressures and waveforms use ultrasound and blood pressure cuffs to evaluate the arteries that supply the arms and legs with blood. Several blood pressure cuffs will be placed at different levels on your legs and arms. When inflated, the cuffs will provide blood pressure readings as well as waveforms, which can determine if areas of blockage exist within the arteries.
- Abdominal vascular duplex ultrasound is used to evaluate the blood vessels that provide blood flow to the abdominal organs. Prior to this exam, you must fast (eat no solid foods) for 12 hours. You may have clear liquids only and take your morning medications with water before the test. If you have diabetes, talk to your nurse about specific instructions.

Before the exam

To prepare for your vascular ultrasound examination, wear comfortable clothing. Plan to arrive 15 minutes before your scheduled appointment to allow time for registration. You may be given a hospital gown and asked to undress from the waist up or from the waist down. There is no special preparation needed for most exams except fasting for the abdominal vascular ultrasound exam. You will be given special instructions if you are having this type of exam.

During the exam

A registered vascular technologist will perform your procedure. A gel is applied to the area to be examined and a small, microphone-like device is passed over the skin. An image is then produced on a screen on the ultrasound machine, which you will be able to watch.

Ultrasound is also used to measure the blood flow in specific vessels. The technologist will listen to the sound of your blood flow during your examination. Most exams take 30 to 60 minutes.

After the exam

After the exam, you may continue your daily routine. There is no recovery time needed.

A vascular surgeon will review and interpret your images and blood flow measurements. Your doctor will have the results in 24 to 48 hours.

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