



## **Pacific Cardiovascular Associates Medical Group Imaging Testing (Ultrasound/Doppler)**

### **Ankle-Brachial Index (ABI)**

The ankle-brachial index test is a quick, non-invasive way to check your risk for peripheral arterial disease (PAD). People with blockages of a peripheral artery are at higher risk for heart attack, stroke, poor circulation and leg pain.

The test is done by measuring the blood pressure in the arms and ankles while the person is at rest. Measurements are also repeated at both sites (arms/legs) after 4 minutes of toe raises.

#### **No Preparation is Needed**

**Appointment Time:** 60 minutes

**This test is non-invasive**

### **Aorta Duplex**

The aorta is the largest and most important blood vessel in the body as it pumps oxygenated blood throughout the body. This procedure is used to detect signs of abdominal aortic aneurysm (AAA) a condition in which the walls of the abdominal aorta become weakened and expand outward. It can also detect tears in the aorta, calcification, blockages and other plaque buildup.

**Preparation:** Do not eat after midnight, however medications can be taken with a small amount of water.

**Appointment Time:** 60 minutes

**This test is non-invasive**

## **Echocardiogram**

An echocardiogram is a safe, non-invasive procedure used to examine your heart. It utilizes high frequency sound waves (ultrasound) to see all four chambers of the heart, the heart valves, the great blood vessels entering and leaving the heart as well as the sac around the heart. Early detection of many heart disorders and disease is possible with echocardiography performed within PCA facilities. This test provides an opportunity to view the heart structurally and helps assess heart and heart valve function.

**Preparation:** Wear comfortable clothing that can be removed from the waist up.

**Appointment Time:** 60 minutes

**This test is non-invasive**

## **Inguinal Duplex**

This test is used to rule out the presence of a pseudoaneurysm, also known as a false aneurysm. These can be accompanied by a hematoma that forms as a result of a leaking hole in the artery after a heart catheterization procedure is performed. It usually is only necessary to check the side in which the catheter was placed. This is an uncommon occurrence, but it is important to diagnose soon after the arterial puncture procedure.

**No Preparation is Needed**

**Appointment Time:** 60 minutes

**This test is non-invasive**

## **Transcranial Doppler**

This ultrasound test is non-invasive yet provides an effective means to detect abnormal communications between the heart chambers such as atrial septal defects (ASD) or patent foramen ovale (PFO). These abnormal communications are usually present between the right and left upper heart chambers. These communications can be detected by assessing the appearance of injected microbubbles through the vein in the arm and monitoring for the appearance of them in the brain.

**Preparation:** Please wear short sleeve shirt.

**Appointment Time:** 60 minutes

**This test requires the insertion of an IV catheter temporarily.**

## **Venous Duplex – Upper/Lower Extremity**

Ultrasound is used to image the veins from the groin to the ankle or neck to wrist to evaluate blood flow in the veins. This test evaluates for possible blood clots, also known as thrombus, that has formed in the vein. This is called deep vein thrombosis or DVT. Patients with DVT may or may not have symptoms but can lead to pulmonary embolism if the blood clot breaks loose and travels to the lungs.

### **No Preparation Needed**

**Appointment Time:** 60 minutes

**This test is non-invasive**

## **Arterial Duplex – Upper /Lower Extremity**

Ultrasound is used to image the arteries from the groin to the ankle or neck to the wrist to evaluate blood flow in the arteries. The test will show if there is any blockage in the arteries or other disturbances in the arterial blood flow.

\*An Ankle Brachial Index Test is performed prior to the performance of a lower extremity arterial duplex.

### **No Preparation Needed**

**Appointment Time:** 60 minutes

**This test is non-invasive**

## **Renal Duplex**

The renal arteries carry blood flow to the kidneys. If these arteries become narrowed or blocked it may lead to kidney failure or high blood pressure. This test can locate any clots or narrowed areas within the arteries. The test can also determine the size of the kidneys and the presence of any cysts.

### **No Preparation Needed**

**Appointment Time:** 60 minutes

**This test is non-invasive**

## **Carotid Duplex**

This test checks the blood Flow in the carotid arteries (located in the neck). These arteries supply blood directly to the brain. This test can detect:

1. Blood clotting (thrombosis)
2. Narrowing in the arteries (stenosis)
3. Other causes of blockage in the carotid arteries
4. Other disturbances in blood flow

This test is very important in helping assess patients at risk of a stroke.

### **No Preparation Needed**

**Appointment Time:** 30 minutes

**This test is non-invasive**

## **Venous Duplex Reflux**

Ultrasound is used to image the legs from the groin to the ankle to evaluate blood flow and assess the competence of the valves within the veins. When the valves that keep the blood flowing back to the heart no longer function well, the blood pools and it can cause pain, swelling, heaviness, fatigue and changes to the skin. This test allows the confirmation of venous insufficiency which is very treatable, and this can relieve the symptoms.

### **Preparation:**

1. Patient should not perform any significant exercise 24 hours prior to the study.
2. Patient should not wear compression stockings for 48 hours prior to the study.
3. Patient should hold diuretics for the day of the study until after the after the study if possible.
4. Patient should be well hydrated the day of the study.

**Appointment Time:** 90 minutes

**This is a non-invasive test.**

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