

The Vascular Screening

Carotid Artery Disease/Stroke

The vascular screening evaluates for *carotid artery disease* which can lead to stroke. The carotid arteries are located in the neck and take blood from the heart to the brain. A significant plaque buildup or *stenosis* can decrease the amount of blood the brain receives and lead to stroke. During the screening, an ultrasound is performed of the carotid arteries; plaque buildup is then assessed; and the blood flow through the vessels is evaluated.

Abdominal Aortic Aneurysm

Abdominal aortic aneurysm (AAA) is a condition in which the lining of the blood vessel called the aorta is enlarged within the abdomen. The aorta is the largest artery in the body, essentially the trunk of the arterial tree, and its rupture can cause blood loss, shock, and death. The abdominal aorta should measure less than 3 centimeters and is considered aneurismal if it measures greater than 3 centimeters. Because abdominal aortic aneurysms are likely to tear if they reach 5 centimeters in diameter, regular monitoring is important to prevent rupture. During the screening, an ultrasound is performed of the abdominal aorta, and its largest diameter is measured.

Peripheral Arterial Disease

Peripheral arterial Disease (PAD) is also known as hardening of the arteries which most often involves plaque buildup in the arteries of the legs. Depending on its severity, PAD can cause symptoms as mild as calf and/or thigh cramping and as severe as tissue loss in its advanced stages. Patients are screened for PAD by using the ankle-brachial index (ABI). The ankle-brachial index obtains very precise blood pressures in the arms and in the legs resulting in a ratio between the two. This ratio indicates how well blood flows to the legs. A ratio of less than 0.90 indicates plaque buildup and possible peripheral arterial disease. A ratio of 0.90 or greater is considered normal.

Patient Preparation

It is not necessary for patients to fast prior to the screening. Patients may eat, drink, and take their medications. The abdomen can be gassy, however, which can sometimes make the abdominal aorta more difficult to visualize. Patients would be wise to eat a light meal prior to the screening and avoid gas-producing foods and activities such as smoking, chewing gum, and carbonated beverages.

Patients do not need to undress for the screening. They should, however, wear loose clothing allowing easy access to the neck, arms, abdomen, and ankles. Pantyhose should not be worn. Turtleneck or high-neck sweaters should not be worn and open collars are encouraged.

The screening should take approximately 15-20 minutes.