

Carotid duplex

Definition

Carotid duplex is an ultrasound test that shows how well blood is flowing through the carotid arteries. The carotid arteries are located in the neck. They supply blood to the brain.

Alternative Names

Scan - carotid duplex; Carotid ultrasound; Carotid artery ultrasound; Ultrasound - carotid; Vascular ultrasound - carotid; Ultrasound - vascular - carotid

Why the Test is Performed

The carotid duplex test checks blood flow in the carotid arteries. It can detect:

- Blood clotting (thrombosis)
- Narrowing in the arteries (stenosis)
- Other causes of blockage in the carotid arteries

Your doctor may order this test if:

- You have had a stroke or transient ischemic attack (TIA)
- You need a follow-up test because:
 - The carotid artery was found to be narrowed in the past
 - You have had surgery on your carotid artery
- Your doctor hears an abnormal sound called a bruit over the carotid neck arteries. This may mean the artery is narrowed.

How the Test is Performed

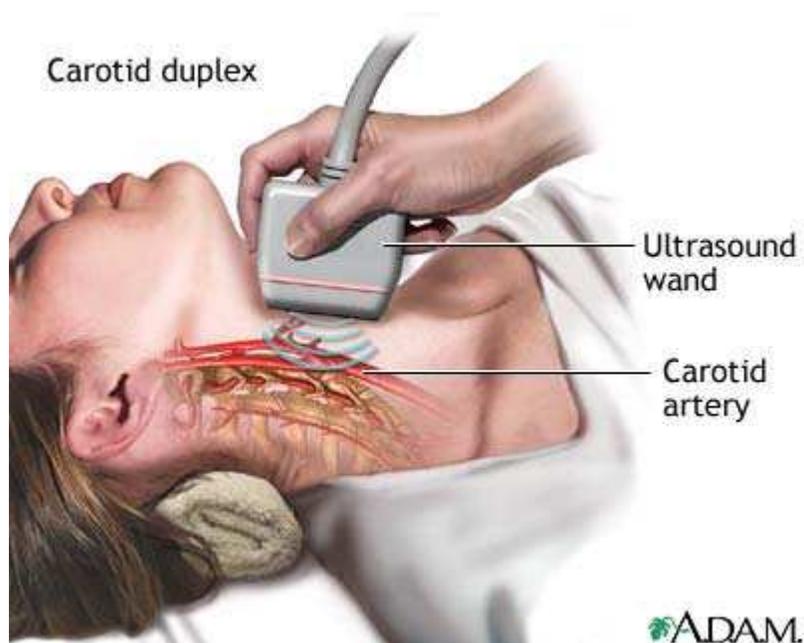
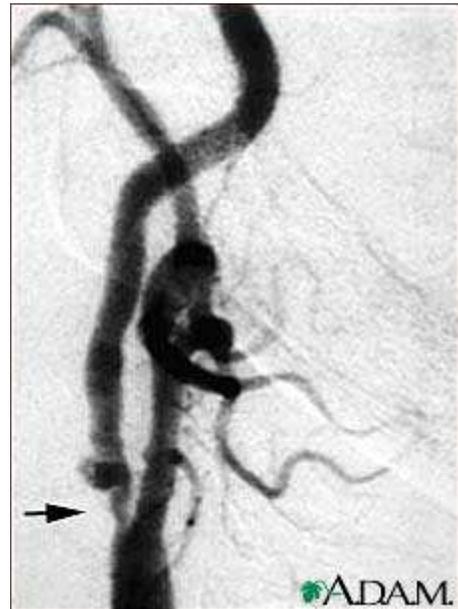
The test is done in a vascular lab or radiology department of a hospital. You will be asked to lie on your back. Your head will be supported to prevent it from moving.

The health care provider applies a water-soluble gel on your skin and gently runs a handheld device called a transducer over the area of the carotid arteries in your neck.

The device sends high-frequency sound waves to the arteries in your neck. The sound waves bounce off the blood vessels and form images or pictures of the insides of the arteries.

How to Prepare for the Test

No preparation is necessary.



How the Test Will Feel

You may feel some pressure as the probe is moved around your neck. The pressure should not cause any pain. You may also hear a "whooshing" sound.

Risks

There are no specific risks related to having this procedure.

Normal Results

The results will tell your doctor how open or narrowed your carotid arteries are. For example, the arteries may be 10% narrowed, 50% narrowed, or 75% narrowed.

A normal result means there is no problem with the blood flow in the carotid arteries. The artery is free of any blockage, narrowing, or other problem.

Note: Value ranges may vary slightly among different laboratories. Talk to your doctor about the meaning of your specific test results.

What Abnormal Results Mean

An abnormal result means the artery may be narrowed, or something is changing the blood flow in the carotid arteries. This is a sign of atherosclerosis or blood vessel conditions.

In general, the more narrowed the artery is, the higher your risk for stroke.

Depending on the results, your doctor may want you to:

- Consider surgery
- Have additional tests (such as cerebral angiography, CT angiography, and magnetic resonance angiography)
- Follow a healthy diet and lifestyle to prevent atherosclerosis
- Repeat the test again in the future

See the article on atherosclerosis for further treatment information.



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