



Preparation For The Exam:

- In general, there is no preparation for the exam.
- You will be asked to remove any jewelry from around the neck.
- It is advised that you wear a loose fitting, open necked shirt or blouse.



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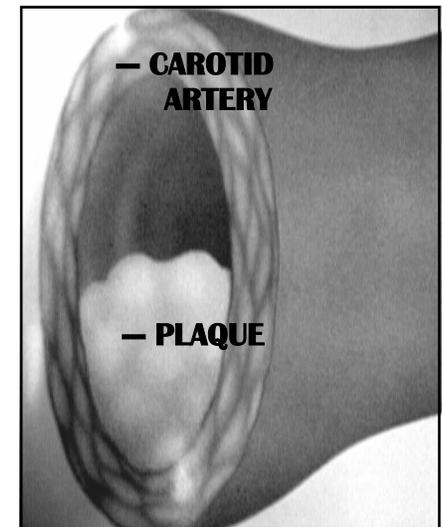
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HELENA CARDIOLOGY CLINIC

A Patient's Guide to Carotid Ultrasound (Doppler)



Your doctor has recommended that you receive a test called a **Carotid Ultrasound (Doppler)**

Atherosclerotic vascular disease (**hardening of the arteries**) continues to be of major concern to physicians in their treatment of aging patients. This is a progressive disease caused by a slow build-up of cholesterol deposits (**Plaque**) within the arteries. The deposits of plaque that form on the artery walls can cause a significant decrease of blood flow to muscles and vital organs. When this condition is present in the **Carotid Arteries**, there is a much higher risk of stroke. This is a treatable and surgically correctable condition.

The Carotid Arteries are the major blood vessels supplying the head and brain with the necessary blood flow to deliver oxygen. They branch off of the **aorta** (the main artery leaving the heart) and with some variation between the right and left side of the body, travel up the throat, one on each side of the windpipe (**right and left common carotid arteries**). At about the jawbone, there is another branching into the **external** and **internal carotid arteries**. The external carotid supplies blood to the face, scalp and other external head tissues. The internal carotid supplies blood to the brain. It is at this branching that most plaque build-up occurs and therefore, most blockages are found. The major concern is for the blood flow through the internal carotid arteries as they supply the brain.

Carotid Ultrasound (Carotid Doppler) is a simple, painless, way of assessing blood flow through your carotid arteries.

How the Carotid Ultrasound Exam is done.

- You will be asked to lie flat on your back (some adjustments can be made for those who require a pillow for support).
- A clear gel is applied to your neck and a **transducer** is gently placed to one side of the windpipe.
- The transducer is manipulated up and down the length of the neck to record the entire length of the carotid artery and blood flow measurements are recorded.
- The process is then repeated on the other side of the neck.
- Generally, **one hour** is allotted for the exam (from entering the clinic to leaving).



The Carotid Ultrasound study is a **safe, simple and cost effective method** of assessing blood flow through the carotid arteries and determining significant restriction of blood flow. During this part of the exam, the carotid arteries are seen and pictures are recorded detailing the condition of the arteries and show any plaque deposits that may interfere with normal blood circulation. **Color Doppler** and **Pulsed Wave Doppler** are methods the examiner uses to measure blood flow velocities recording any areas of restriction.

