

## Arterial Exams

Arteries deliver the blood from the heart to the body. An arterial exam often consists of a scan and a series of blood pressure (BP) readings. The scan uses sound waves to check how well the blood flows through the arteries to different parts of the body. Specific exams include:

*Arterial exams help detect a blockage in blood flow.*

- An **Arterial Exam, Upper Extremity** looks at the arteries from under your arm to the wrist. Both arms are examined.
- An **Arterial Exam, Upper Extremity with Digits** is the same as the upper extremity exam but includes the fingers.
- The **Arterial Exam, Lower Extremity** looks at the arteries anywhere from the groin to the ankle or big toe. Both legs are examined.
- The **Arterial Exam with Exercise** checks the same arteries as the lower extremity exam but includes an exercise segment. Patients are asked to walk on a treadmill for 5 minutes or less. Exercise and resting BP readings in the ankle are compared. This test usually is not done in patients who are over 80 years of age; patients who have a systolic BP reading (upper number) greater than 200; or those who have had a heart attack, stroke or heart surgery within the last year.
- An **Arterial Duplex, Upper** focuses only on a **selected artery or area** in the arm(s). A picture of the artery wall is taken.
- An **Arterial Duplex, Lower** looks at only a **certain area or artery** in the leg. A picture of the artery wall is taken.
- An **Arterial Duplex Graft** examines the blood flow in a post-surgery bypass graft.

All of these exams help to detect a blockage in blood flow (such as a blood clot). If blockages are found, the exam tells us where and how severe they are. Each exam, done in the Vascular Lab, takes about 60 minutes.

## Before the Test

There is no special preparation for this test.

On the day of the exam, plan to arrive 15 minutes before your test time. Be sure to bring:

- Your doctor's written order for the test
- Medical insurance information
- Medicare card (Medicare patients only)

For their own safety, children under the age of 16 may not visit in the testing area. They may stay in the Waiting Room with a responsible adult.

Parking is available for patients and visitors in the garage at 222 E. Huron, across from the Feinberg and Galter pavilions. For discounted rates, please bring your parking ticket with you. Tickets can be validated at the Customer Services Desks on the 1st and 2nd floor of the Feinberg and Galter pavilions; 1st floor of Prentice (including the Prentice 24 hour desk near the Superior entrance).

## During the Test

The technician (tech) will help you to lie flat on your back on the exam table. A warm gel will be applied to the skin. Then, the tech moves a small hand-held device (transducer) on the skin over the arteries being examined. The transducer transmits sound waves to a monitor, where images can be seen and saved for later review. During the test, you may be asked to take deep breaths. You may see the images on the monitor and hear some sounds as the tech records the blood flow. Depending on the area being tested, blood pressure (BP) readings may be taken in your arms or legs. The readings are recorded and compared.

For an *Arterial Exam with Exercise*, you are asked to walk on a treadmill for 5 minutes. (During exercise patients are connected to a heart monitor.) After you walk, the tech takes the BP in your ankles and arms again. (If there is an arterial blockage, your BP in your ankle will drop.) The tech takes these readings about every minute until your BP returns to the pre-exercise level.

## After the Test

The tech will provide towels to help remove the gel. You will receive test results at the end of the exam. You may resume your normal diet and activities. The vascular surgeon who reads the test will send the results to your referring doctor. Most often, these findings are sent to your doctor within 48 hours. A full report follows in about 5 business days.

## **Health Information Resources**

For more information, visit one of Northwestern Memorial Hospital's Health Learning Centers. These state-of-the-art health libraries are located on the third floor of the Galter Pavilion and on the first floor of the Prentice Women's Hospital. Health information professionals are available to help you find the information you need and provide you with personalized support at no charge. You may contact the Health Learning Centers by calling 312-926-LINK (5465) or by sending an e-mail to [hlc@nmh.org](mailto:hlc@nmh.org).

For additional information about Northwestern Memorial Hospital, please visit our Web site at [www.nmh.org](http://www.nmh.org).

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For more information about Northwestern Memorial Hospital, please visit [www.nmh.org](http://www.nmh.org).

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