Exercise Cardiac Perfusion Study: Nuclear Cardiology

An exercise perfusion study checks the blood flow to your heart. The test measures your heart’s response to exercise and can detect coronary artery disease (CAD) blockage in the blood vessels to the heart. It also can show how severe the blockages are.

The test consists of 2 sets of pictures or scans. The first set is taken when you are at rest. The second is done after you walk on a treadmill or pedal a stationary bike. Both scans use small amounts of radioactive tracers to show the blood flow (perfusion) to the heart muscle. The amount of radiation used in this test is small and well within limits that are not harmful. Your total test time is about 3½ hours.

Before the test
- You may eat a light meal at least 2 hours before your appointment time.
- No caffeine is allowed for 12 hours before the test. This includes coffee, tea, cola, chocolate or any medicines that contain caffeine, such as Excedrin®. Decaffeinated products and products marked “caffeine-free” also should be avoided.
- Patients taking theophylline and/or dipyridamole must not take these medicines for 24 hours before the test and must check with their physician before discontinuing them.
- Please wear or bring with you comfortable clothing and shoes for walking on the treadmill. Patient lockers and showers are available for your use.

If you have any questions about this test, please call the Nuclear Cardiology Department at 312.926.8662, Monday through Friday, 7:30 am to 4:00 pm.

On the day of the test, plan to arrive 15 minutes before your test time. Be sure to bring:
- Your physician’s written order for the test if one was given to you
- A list of allergies
- A list of all your current medications (prescription, over-the-counter and herbals)
- Photo ID
- Medical insurance information and card
- Medicare card (Medicare patients only)

Please come to the 8th Floor reception desk in the Galter Pavilion, 201 East Huron Street.
Parking is available for patients and visitors in the garage at 222 East Huron Street, across from the Feinberg and Galter pavilions. For discounted rates, please bring your parking ticket with you. Tickets can be validated at the Customer Service desk on the 1st or 2nd floor of the Feinberg and Galter pavilions, or the 1st floor of Prentice Women’s Hospital (including the 24-hour desk near the Superior Street entrance).

During the test

A nurse or technologist (tech) will explain the test to you and place an IV (into the vein) line in your arm. You will be asked to consent in writing. If you think you may be pregnant or if you are breastfeeding, please tell the tech. The radioactive tracer will be given through the IV line 15 to 30 minutes before the first pictures are taken.

Once you are on the imaging table, please lie quietly on your back. The camera will be close to your chest and will take pictures from different angles. This will take 15 to 30 minutes. It is important not to move during this time.

For the exercise part of the test, you will be asked about your health history. You will be asked to put on a hospital gown. The skin on your chest will be prepared for electrode placement with rubbing alcohol and a mild abrasive. The electrodes measure the electrical activity of your heart. You will be asked to walk on a treadmill or pedal a stationary bicycle. Exercise will begin slowly, at a low level, and slowly increased to higher levels of exertion. The physician or exercise physiologist will closely check your blood pressure, heart rate and electrocardiogram (ECG). Be sure to tell the physician or exercise physiologist if you have:

- Dizziness
- Fatigue
- Shortness of breath
- Chest pain

You and the physician or exercise physiologist will decide when to end the exercise.

Then, you sit or lie down for several minutes while you cool down. After the stress portion of your test, another set of pictures will be taken. Again, it is very important that you do not move while these pictures are being taken.

After the test

You may resume your normal activities and diet after the test.

Complications are rare and may include changes in blood pressure, irregular heart rate and, in very rare instances, heart attack, stroke or death. If you have any questions about these risks, please ask the physician, exercise physiologist or nurse present at your test.

If you have any concerns, please call the Nuclear Cardiology Department at 312.926.8662.

Para asistencia en español, por favor llamar al Departamento de Representantes para Pacientes al 312.926.3112.

The entities that come together as Northwestern Medicine are committed to representing the communities we serve, fostering a culture of inclusion, delivering culturally competent care, providing access to treatment and programs in a nondiscriminatory manner and eliminating healthcare disparities. For questions, please call either Northwestern Memorial Hospital’s Patient Representatives Department at 312.926.3112, TDD/TTY 312.926.6363 or the Northwestern Medical Group Patient Representatives Department at 312.695.1100, TDD/TTY 312.926.6363.

Developed by: NMH Nuclear Cardiology Department

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