

# 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 significant coronary artery disease blockage in the blood vessels to the heart. It also can show how severe the blockages are.

If there is a chance that you could be pregnant, please tell the tech.

The test will make 2 sets of pictures or scans. The care team will take the 1st set when you are at rest. They will get the 2nd set 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 will be about 3 1/2 hours.

## Before the test

- › You may eat a light meal at least 2 hours before your appointment time.
- › Do not eat or drink caffeine for 12 hours before the test. This includes coffee, tea, cola, chocolate or any medications that contain caffeine, such as Excedrin®. Avoid decaffeinated products or products labeled as “caffeine-free” because they may contain small amounts of caffeine.
- › If you take theophylline and/or pentoxifylline (Trental®), do not take these medications for 24 hours before the test. Check with your physician before stopping them.
- › If you take dipyridamole (Persantine®) or acetylsalicylic acid/dipyridamole (Aggrenox®), do not take these medications for 48 hours before the test. Check with your physician before stopping them.

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- › Wear (or bring with you) comfortable clothing and shoes for walking on the treadmill. Patient lockers and showers are available for you to use.

Plan to arrive 15 minutes before your test time. Be sure to bring:

- › A list of your allergies
- › A list of all your current medications (prescription, over-the-counter and herbal)
- › Photo ID
- › Medical insurance information and card
- › Medicare card (Medicare patients only)


Come to the 8th floor reception desk in Galter Pavilion, 201 East Huron Street.

Parking is available for patients and visitors in the garage at 222 East Huron Street, across from Feinberg and Galter pavilions. For a discounted rate, bring your parking ticket with you. You can validate your ticket at the Customer Service Desk on the 1st or 2nd floors of the Feinberg and Galter pavilions, or the 1st floor of Prentice Women's Hospital.

## During the test

A nurse or technologist (tech) will explain the test to you and ask you to consent to the test. If you think you may be pregnant or if you are breastfeeding, please tell the tech. They will place an IV (into the vein) line in your arm. They will give you the radioactive tracer through the IV line. After the tracer circulates in your blood for 15 to 30 minutes, they will take the 1st set of pictures.

The care team will help you move onto an imaging table. Please lie quietly on your back. The camera will be close to your chest. It is very important that you do not move while the camera takes the pictures. The camera will take pictures at different angles. It will take about 15 to 30 minutes to complete them.



For the exercise part of the test, the care team will ask you about your health history. They will ask you to put on a hospital gown. They will prepare the skin on your chest for the electrode placement with rubbing alcohol and a mild abrasive. The electrodes will record your heart rhythm (electrical activity) during the test.

You will walk on a treadmill or pedal a stationary bicycle. Exercise will begin slowly, at a low level, and slowly increase to make you work harder. The exercise physiologist will closely check your blood pressure, heart rate and electrocardiogram (ECG). Be sure to tell the exercise physiologist if you have:

- › Dizziness
- › Fatigue
- › Shortness of breath
- › Chest pain

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

Then, you will sit or lie down for several minutes while you cool down. After the stress portion of your test, the care team will take another set of pictures. Again, it is very important that you do not move while the exercise physiologist is taking these pictures.

## After the test

You may go back to your normal activities and diet after the test.

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

If you have any questions or concerns about this test, call the Nuclear Cardiology Department at 312.926.8662 (TTY: 711), Monday through Friday, 7:30 am to 4:00 pm.

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For more information about Northwestern Medicine, please visit our website at [nm.org](https://www.nm.org).