

MYOCARDIAL PERFUSION SCINTIGRAPHY

Purpose of the study

Myocardial perfusion scanning and the stress test associated with it are used to establish the presence, location, extent, severity and prognosis of coronary artery disease.

Preparing for the study

Heart rate and blood pressure are affected by recreational substance use, eating, and exercise. Therefore, the following are prohibited:

- For **48 hours before** the study, do not use
 - medicines containing dipyridamole.
- For **36 hours before** the study, do not
 - drink alcoholic beverages.
- For **24 hours before** the study, do not use
 - medicines containing theophylline.
- For **12 hours before** the study, do not
 - eat chocolate,
 - drink coffee or tea, or
 - drink energy drinks or cola.
- For **4 hours before** the study, do not
 - smoke.

Avoid physical strain on the day before the study and the day of the study.

You should have a light meal, such as a small sandwich with a glass of milk, about two hours before the study. Do not fast.

Bring trousers and footwear that are suitable for pedalling a stationary bicycle. You can also borrow a pair of trainers from the department if you need to.

Bring along the prescriptions for the medicines you use.

If you have a respiratory infection, such as a cold, you must wait at least two weeks after recovering before you come in for the study.

Please follow the preparation instructions closely!

Medication pause

The referring doctor will decide if it is necessary and safe for you to pause any of your medications before the study. If your doctor orders you to pause any medication, follow the instructions below.

() No medication pause. Take all your medicines normally before the study.

() Medication pause. Stop taking the following heart medicines:

Medicine: _____ paused for _____ days

Medicine: _____ paused for _____ days

Medicine: _____ paused for _____ days

You should try not to take short-acting nitrates (Dinit spray, Nitro, Nitromex) for two hours before the study if possible.

Please contact the doctor responsible for your care if you have questions about your medications.

What to expect at the study

You will receive a small amount of radioactive tracer through an intravenous catheter at your inner elbow. We will wait one hour for the tracer to make its way into your heart muscle. Electrocardiogram (ECG) electrodes will then be placed on your chest so that we can monitor your heart rate during imaging. The first scan (the rest scan) will take up to 30 minutes.

After the resting scan, you will start the stress test under a doctor's supervision. You will pedal a stationary bicycle during the test, or a drug that causes pharmacologic stress may be administered as an alternative. The supervising doctor will decide which kind of stress to use in the test. At the end of the stress phase, you will receive another dose of the tracer through the catheter in your arm.

Then we will perform another scan of your heart (the stress scan). This scan will take about 15 minutes.

For the scans, you will need to take off any items in your chest area that contain metal (e.g. large necklaces, underwire bras).

Peddalling stress test

When a stationary bicycle is used for the stress test, you will need to keep pedalling until you are exhausted or until you develop symptoms/problems that force you to stop.

In the final part of the stress test, another dose of the tracer will be administered through the intravenous catheter in your arm and you will then need to keep pedalling for another two minutes. We will monitor your ECG and blood pressure during the test. We will record any symptoms you may have, first during the rest phase and then during the exercise and recovery phases. Total pedalling time is usually about 10 to 15 minutes.

Pharmacologic stress test

If you have the pharmacologic version of the stress test, an intravenous drug will be administered to you slowly. This dilates the coronary arteries and sometimes causes symptoms such as facial flushing, chest pain, shortness of breath, dizziness and nausea. The symptoms go away quickly after administration of the drug is stopped.

Three minutes after the pharmacologic stress is started, you will receive another dose of the tracer through the intravenous catheter. We will monitor your condition throughout the stress test and for another 5 to 6 minutes after the test, or until your symptoms go away.

Duration of the study

The entire study takes 3 to 4 hours, including the waiting times, scanning and stress test.

Study results

The study results will be provided later by a doctor at the ward or clinic that referred you.

After the study

If you were ordered to pause any heart medications, you may resume them when the study has been completed.

You will emit a small amount of radioactivity into your immediate environment after the study. After the study, you should drink plenty of fluids and empty your bladder more often than usual so that the radioactivity will leave your body through your urine.

Avoid close contact with pregnant women on the day of the study. After the study you should also avoid holding children or being next to them for more than half an hour during the day. Anyone will be completely safe from the radiation at a distance of just two metres. The radiation will dissipate spontaneously by the following day.