

Myocardial perfusion scan

This fact sheet tells you what a myocardial perfusion scan is, and what is involved in having one. Please read it before having your scan. If you have any questions, ask your doctor.

What is a myocardial perfusion scan?

A myocardial perfusion scan is a nuclear medicine test used to look at the blood flow to the heart. It can identify blocked or partially blocked cardiac blood vessels.

Before the procedure

You will be given full instructions on how to prepare for your scan. You might be asked to skip some of your usual medications for the day of the test.

For four hours before the test, you should not have anything to eat but you may drink water. For 48 hours before the test, you should not have any food or drink containing caffeine, including coffee, tea, chocolate or cola.

You should tell your doctor and imaging staff if you are pregnant or think you may be pregnant, or if you have diabetes.

Wear comfortable clothing and shoes, suitable for walking on a treadmill. Allow five hours to do the scan.

The procedure

A small amount of a radiopharmaceutical (radioactive tracer) will be injected through a small needle in a vein in your arm. The tracer travels through the blood and goes into the healthy heart muscle with normal blood flow. The scan will show the areas where the tracer has gone into differently to the other areas. Areas where the tracer does not go might be damaged from decreased or blocked blood flow.

After these scans are done, you will do a stress test. Usually you will be asked to walk on a treadmill to 'stress' you. If you can't walk on a treadmill for any reason, you may need a drug to be injected that can reproduce the effect of exercise. It has few side effects. The doctor may still ask you to do a little bit of exercise, but only for 2–3 minutes.

After your stress test there will be time to eat and drink. Another scan will be done so these pictures can compare the blood flow to your heart after it has been 'stressed'.

Doctors often ask for extra images to be taken during the scan. This is normal so don't be worried.

After the procedure

A nuclear medicine physician (a specialist doctor) looks at the images and sends the results to your treating doctor. You should not have any issues after the scan.

Risks involved

While all nuclear medicine tests involve some exposure to radiation, the amount is very small and the risk of side effects is very low.

Serious side effects from the stress test are rare. A doctor will closely monitor you throughout the stress test for any problems.

For more information

Nuclear medicine: Answering your questions by the Australian Nuclear Science and Technology Organisation: www.ansto.gov.au/cs/groups/corporate/documents/webcontent/mdaw/mdax/~edisp/acstest_038604.pdf

Myocardial Perfusion Scan, Resting and Myocardial Perfusion Scan, Stress by John Hopkins Medicine: www.hopkinsmedicine.org/healthlibrary/test_procedures/cardiovascular/myocardial_perfusion_scan_resting_92,p07978/ and www.hopkinsmedicine.org/healthlibrary/test_procedures/cardiovascular/myocardial_perfusion_scan_stress_92,p07979/

The Australian Radiation Protection and Nuclear Safety Agency: www.arpsa.gov.au

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