

Contact information

Nuclear Cardiology Laboratory
Main Building 1, Level 1, Functional Imaging Centre

For appointments, please contact

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For International Patients And Visitors

The International Patients Liaison Centre (IPLC) is a one-stop service centre to support all the medical needs of our foreign patients

Tel : (65) 6779 2777 (24-Hours Helpline)
Fax : (65) 6777 8065
Website : www.nuh.com.sg/iplc.html



National University Hospital

5 Lower Kent Ridge Road, Singapore 119074
Tel: 6779 5555 Fax: 6779 5678 Website: www.nuh.com.sg

Location



Free Shuttle Bus Service

Free Shuttle Bus Service from Dover MRT Station to NUH

Operation hours : 8.00 am – 8.30 pm (Mondays – Fridays)
8.00 am – 2.00 pm (Saturdays)
Not available on Sundays and Public Holidays

Dover/NUH passenger pickup/ drop off point : 1. Dover MRT Station (opposite Singapore Polytechnic)
2. Main Building, Lobby Entrance (near roundabout)
3. Kent Ridge Wing, Level 3, South Entrance

For more information on Shuttle Bus schedule, log on to www.nuh.com.sg

Information in this brochure is given as a guide only and does not replace medical advice from your doctor. Please seek the advice of your doctor if you have any questions related to the surgery, your health or medical condition.

Information is correct at time of printing (Jan 2010) and subject to revision without notice.

Exercise Stress Myocardial Perfusion Imaging Test



What should I do?

1. You can have a light meal before the test. Avoid taking food or drinks which contain caffeine (coffee, tea, chocolate, Coke) at least 12 hours before the test. If you are unable to achieve adequate exercise stress, you may need to undergo a vasodilator stress test instead. Caffeine will interfere with this test.
2. Come in sports attire to facilitate the exercise.
3. Medications that slow down the heart rate, such as atenolol and diltiazem, should be omitted 48 hours prior to the test. Please check with your doctor about this.
4. Inform your doctor if you have conditions that make exercise difficult, such as backaches. Also, exercise should not be performed if you have fever, viral and other accompanying acute illnesses. Please check with your doctor.
5. Avoid smoking for at least 6 hours before the test.

What are the potential risks/complications with this test?

Exercise testing is generally very safe. Most complications are minor. These include injuries sustained from falling from the treadmill machine. Very rarely, a heart rhythm abnormality or heart attack may occur during exercise.

The radioactive chemical given is very safe and has no known immediate side effects. The amount of radioactivity given during the test is very low and has not been shown to cause cancer. However, you should inform the doctor if you are pregnant.

When will I know the results?

The doctor supervising the test can usually tell you the preliminary results of the exercise test. Your doctor will inform you of the final report at your next clinic appointment. If there is any severe abnormality that requires prompt medical attention before your appointment, your doctor will contact you.

What is exercise stress myocardial perfusion imaging test?

Blood vessels supplying the heart with blood can be abnormally narrowed by a process called atherosclerosis. When this happens, the blood flow to the heart may be insufficient during physical exertion. Exercise stress myocardial perfusion test assesses the blood flow (perfusion) to the heart muscles (myocardium) during exercise.

In our laboratory, we employ treadmill exercise to stress the heart. During treadmill exercise, the level of exercise gradually increases until the patient's heart-rate reaches a certain target. At this time, a very small amount of radioactive chemical (usually technetium or thallium) is injected into the patient. This is taken up by the heart and gives your doctors information about the blood-flow.



What is the purpose of the test?

This test assesses the blood flow (perfusion) to the heart. It also gives the doctor an indication of how strongly the heart is beating (the Ejection Fraction). These are the 2 most important pieces of information a doctor needs when evaluating a patient with heart disease.

This test is more accurate and gives more information than treadmill stress tests alone.

What can I expect?

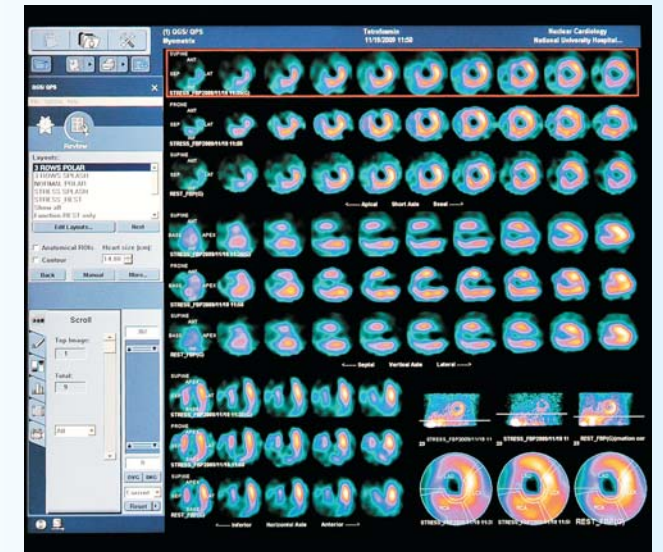
The test is performed in the Nuclear Cardiology Laboratory. This test consists of 2 phases – the stress phase and the rest phase, both of which are usually done on the same day. The stress test is usually performed first.

Before the test, your height and weight will be taken and a small plastic cannula is inserted in one of the veins on your hand for injection of the radioactive chemical. Male patients will be asked to remove their shirts to facilitate the attachment of ECG wires to the chest. Women may be asked to change into special gowns for this purpose.

Once your blood pressure and a baseline ECG is recorded, you will then proceed with the exercise. Most commonly, the speed and incline of the machine will increase every 3 minutes. Throughout the test, your ECG and blood pressure will be monitored. If you experience any symptoms with the exercise, you must inform the technologist or doctor supervising the test.

The doctor will inject the radioactive chemical into your vein once you reach your target heart rate. You must continue to exercise on the treadmill for one to two minutes after injection to facilitate circulation of the chemical. After the exercise, you will continue to be monitored for a few minutes during the recovery period.

You will next rest for about 30 to 45 minutes during which you can have a drink. After this, it will be time to take images of your heart. You will lie facing upwards while the gamma-camera scans your heart. You should relax and lie fairly still so that accurate pictures can be obtained. The process will take 15 minutes.



Myocardial perfusion images acquired by the gamma camera (left)

Following this first scan, you will need to wait for about 4 hours before the rest phase of the test. During this waiting period, you are allowed to leave the laboratory and have some refreshments, but must return at the appointed time. Upon your return, another injection of the radioactive chemical will be given. The second (rest) scan of your heart will be acquired about 45 minutes after this injection. With the conclusion of this second scan, the test is complete.

Sometimes, the test may be performed over 2 days, or the rest phase may be conducted first. You will be given specific instructions if there is any variation from the above routine. Please ask any of the attending staff if you have any questions.