

What should I do?

- 1) It is preferable to avoid food and drink at least 2 hours before the test.
- 2) Come in light clothing to facilitate the examination.
- 3) If you are taking medications that slow down your heartbeat, such as atenolol and diltiazem, you may be instructed to omit these medications for 24-48 hours before the test. Please check with your doctor if any of your medications need to be omitted.

What are the potential risks/complications with this test?

Ultrasound is extremely safe and has no material side effects, even with repeated examinations. Accompaniments or minor adverse effects of exercise on a bicycle include fatigue, leg pain, shortness of breath and dizziness. These are transient and will disappear within minutes after the test is terminated.

Because of close monitoring and expert supervision of the procedure, major complications are exceedingly rare. Heart attack and severe heart rhythm abnormality have been reported. Various medications are available to counter these problems in the unlikely event of their occurrence. If you feel chest pain or any other discomfort during the test, please inform the technologist or supervising doctor.

When will I know the results?

The supervising doctor will need to review the recorded video or computer images and ECG recordings of the ESE procedure. A formal report should be available in 24 to 48 hours. Your doctor will inform you of the results, usually at your next outpatient visit. You may be contacted earlier if there is a severe abnormality or if an urgent management decision is required pending the results.

Contact information

Non-Invasive Cardiovascular Laboratory
Main Building 1, Level 1

Opening Hours: 8.30 am - 6.00 pm (Mon - Fri)
8:30 am - 12:00 noon (Sat)
(except on Public Holidays)

For appointments, please contact
Tel: (65) 6772 2002
Email: appointment@nuh.com.sg

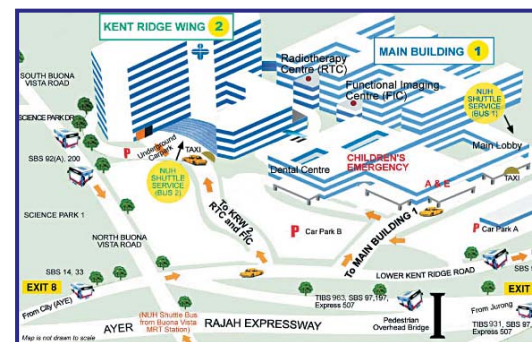
For International Patients And Visitors
The International Patients Liaison Centre (IPLC) is a one-stop service centre to support all the medical needs of our foreign patients

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

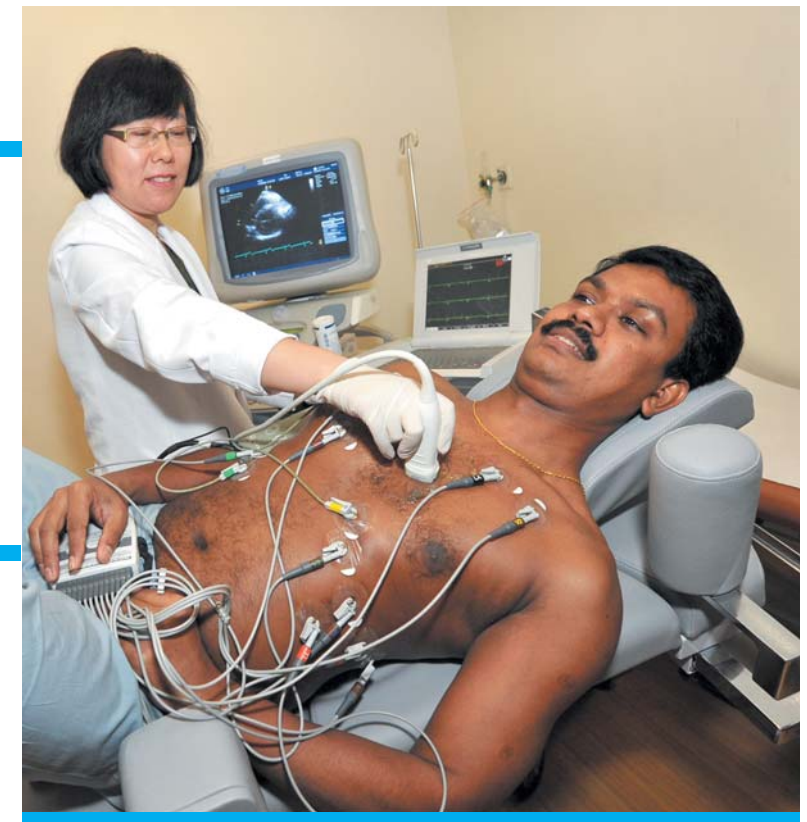
Dover/NUH passenger pickup/ drop off point : 1. Dover MRT Station (opposite Singapore Polytechnic)
2. Main Building, Lobby Entrance (near roundabout)
3. Kent Ridge Wing, Level 3, South Entrance

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 Echocardiography



What is exercise stress echocardiography?

Echocardiography uses ultrasound waves (high frequency sound waves) to visualize the heart and blood vessels. Ultrasound images of the moving heart can be obtained in various planes and displayed on a video monitor.

Exercise stress echocardiography (ESE) is an exercise stress test that allows the cardiologist to study the response of the heart to stress. Ultrasound images are obtained to study the heart's function during the exercise, which is performed on a reclining bicycle that stimulates the heart to beat faster and harder. These are then compared to the images obtained at rest to determine if any part of the heart contracts abnormally, indicating that the blood supply to these abnormal areas may be inadequate.



What is the purpose of this test?

When the heart or coronary arteries are narrowed, the heart muscles may receive adequate blood supply in the resting state but during stress, the blood flow may be insufficient to meet the increasing oxygen demands of the heart muscles. This relative lack of blood supply or myocardial ischaemia causes cardiac chest pain (also known as angina pectoris), and may be a warning sign of a heart attack. ESE is a safe test for inducing myocardial ischaemia. ESE is also much more accurate than an ordinary treadmill exercise electrocardiogram (ECG) test for detecting underlying coronary artery narrowing.

What can I expect?

The test is performed in the Non-invasive Cardiac Clinic. Throughout the examination, which may take about an hour, you will be lying mostly on your back and you may be asked to hold your breath for short periods of time. The doctor supervising the test will explain the procedure and you will also be required to sign a consent form before the test.



Before the examination, multiple ECG leads will be placed on your chest to monitor the heart rhythm. Excess chest hair may sometimes have to be removed to facilitate this. Your blood pressure and ECG will be monitored throughout the test. A water-soluble gel is applied to your chest to improve contact for the ultrasound probe. A technologist will then place the probe on your chest to obtain the best possible ultrasound images before, during and after exercise.

During the exercise, you will be asked to paddle at a specific speed. The resistance applied on the paddles will be increased gradually to result in greater amount of workload. The effect of this is faster and harder heart beats.

At the end of the examination, the technologist will help you clean up the gel, which is easily wiped or washed off. The ECG leads will be removed. You will need to rest for at least half an hour before leaving the hospital.