



## Procedure Information Sheet

### Introduction

Patients with heart disease may not have symptoms at rest. This applies particularly in coronary artery disease, in which there is narrowing of coronary artery but the supply of blood to heart muscle is adequate at rest. Exercise increases demand of blood supply to heart muscle which is not supported in the presence of arterial narrowing. The change can be picked up by different methods. Exercise treadmill test (ETT) detects a change in electrocardiogram waveforms during and after exercise. Some patients may have waveforms not suitable for assessment. Exercise stress echocardiography (ESE) provides an alternative by the use of an echocardiogram to detect a change in heart contraction during and after exercise.

### Indication

Both ETT and ESE can be used to diagnose heart disease or to assess its severity. The tests are especially useful for diagnosing coronary heart disease. They are also helpful in measuring physical fitness of patients with known heart attack

### The Operation / Procedure

1. Patient will be asked to walk on a motor driven treadmill with progressively increased speed and incline until achieve a target heart rate (according to patient's age and medical condition), or develop significant electrocardiogram changes, symptoms or signs.
2. Attending doctor, nurse or technician will continuously monitor patient's symptoms, electrocardiogram and blood pressure to minimize the risk.
3. The treadmill room will be equipped with necessary equipment for emergency resuscitation.
4. If patient is also attending for ESE, doctor or technician will perform a pre-exercise imaging with the echocardiogram machine.
5. Right after exercise, patient will be asked to quickly lie on a stretcher, so that doctor or technician can acquire the necessary post-exercise images.

### Before the Operation / Procedure

1. Both tests are often performed as outpatient procedures.
2. Please put on sports wear and sport shoes for the tests.
3. Light meal can be taken, but preferably at least 2 hours before the test.
4. Elderly will preferably be accompanied by relatives or friends.
5. Doctor will explain the details of the procedure together with the possible risks and complications. Patient has to sign an informed consent.

### After the Operation / Procedure

1. Patient will be asked to rest for 20-30 minutes after the test before leaving is allowed.
2. If the medical problem is assessed to be serious, patient may be admitted to the medical ward for further management.

### Risk and Complications

The procedure carries certain risks, including cardiac arrhythmias, acute myocardial infarction or even cardiac arrest and death. It was reported that there was 1 in 2500 risk of myocardial infarction and death.

### Alternative Treatment / Investigation

Alternative methods include other forms of stress tests (such as pharmacological stress echocardiography, radionuclide test or magnetic resonance), or cardiac catheterization.

### Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

### Reference

Smart Patient Website by Hospital Authority:  
Exercise Treadmill Test (4/2019)

<b>Patient's Label</b>
Patient Name: _____
Hospital No: _____
Episode No: _____

Patient's Signature: \_\_\_\_\_ Date: \_\_\_\_\_