

INTRODUCTION

CPET stands for Cardiopulmonary Exercise Test.

A Cardiopulmonary Exercise Test allows your physician to learn how well your heart and lungs function when they are made to work harder. The information gained from the test helps your physician make an accurate diagnosis and develop a treatment plan that is most appropriate for you.

For people with shortness of breath, Cardiopulmonary Exercise Test can indicate whether the problem is psychological or physiological. It can determine whether the cause of the shortness of breath is cardiac or pulmonary in nature or whether it is secondary to muscle disease or deconditioning.

Many people who suffer from exercise intolerance may notice little decrement in their normal daily activities. Tests on a patient at rest may not indicate the severity of the loss in their abilities. There is a strong relationship between loss of reserve energy and symptoms of exercise intolerance.

When an individual limits his activity so that he slows down or stops before the onset of symptoms, there is a progressive loss of physiological capacity. In time, even normal daily activities will elicit symptoms of exertion intolerance.

With Cardiopulmonary Exercise Test, we can carefully and systematically increase a patient's level of exertion while monitoring both physiological parameters and symptoms. In this manner, we may be able to detect loss of reserve energy or decrease in physiological capacity early on.

Cardiopulmonary Exercise Test may also help to distinguish between shortness of breath which is caused by psychological factors, as opposed to problems caused by cardiac disease, pulmonary disease or muscle and vascular problems.

CARDIOPULMONARY EXERCISE TEST

In NUH, the test is done while you pedal a stationary bicycle. During the test, an electrocardiogram (ECG) records the electrical activity of your heart and will be continuously monitored by experienced technicians with a doctor in attendance.

HOW IS THE TEST PERFORMED?



The Cardiopulmonary Exercise Test is performed by pedalling a bicycle against an increasing resistance. This exercise is similar to riding up a hill, with the hill gradually becoming steeper as you progress.

While the test is performed, the patient will wear a mask. This mask is fitted with a device that is connected to extremely sensitive analysers. At this time, several things are monitored and analysed:



- The amount of air the patient breathes in and blows out (expires) is measured breath by breath. This gas is also instantly analysed to determine the amount of oxygen consumed and carbon dioxide produced.
- The patient's heart rate, electrocardiogram and blood pressure are continuously monitored throughout the test.
- The patient is exercised to their limit, as long as they do not develop any danger signals such as a severe drop in blood pressure, a change in the electrocardiogram or chest pain.

IMPORTANT INSTRUCTIONS

1. PLEASE DO NOT EAT, DRINK OR SMOKE TWO HOURS BEFORE THE TEST. However, plain water is permissible to quench your thirst.
2. Allow approximately two hours for the test.
3. If you are currently on inhalers, please bring them with you on the day of your test.
4. Wear or bring comfortable, loose-fitting clothing and rubber-soled walking shoes. Sweat pants or shorts and tennis shoes are ideal. A changing room is provided for your convenience.
5. Bring a list of medications you routinely take.
6. If you are currently taking any heart or blood pressure medications, check with your physician. He/she may ask you to stop certain medications for a day or two before the test.

7. Please do not wear nail polish or lipstick on the day of test. However you can put them on after you have completed the exercise test.
8. Before the test, you will be given an explanation of the test and you will be asked to sign a consent form. Patients below the age of 21 years require parental/guardian's consent. Please feel free to ask any questions if you have any queries.
9. If you are unwell i.e. having a flu, sorethroat, please call the appoiment line to change your appointment to a later date.

WHAT HAPPENS DURING THE TEST?

You will need to wear a mask. Several electrodes (adhesive patches) will be placed on your chest to record heart activity during exercise. You will be shown how to use a stationary bicycle properly. You will need to pedal for at least 8 – 12 minutes. Pedalling will feel easy at first, then it will gradually get harder. You will be instructed to report any symptoms such as chest discomfort, shortness of breath, leg fatigue or dizziness. A small probe will be placed on your finger during the test to measure the oxygen content in your blood. Immediately after exercising, you will rest for 5 to 10 minutes while your blood pressure and electrocardiogram are monitored. The results will be read by a cardiologist and you will be informed the next time you visit the doctor.

IS THE TEST SAFE?

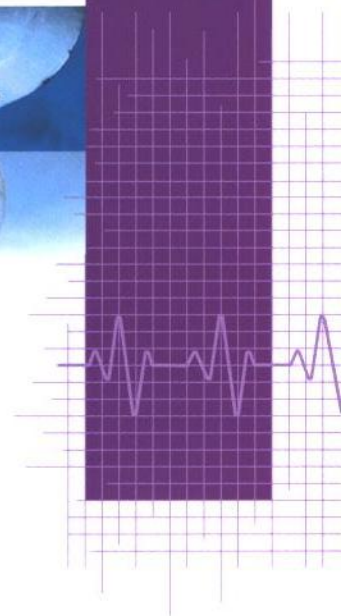
The exercise test is generally safe. A small amount of risk does exist for any test that stresses the heart. Possible rare complications may include abnormal heart rhythms or in rare instances, heart attack. Experienced personnel are available to handle and manage any emergency.

DISCLAIMER

This information is given as a guide only and does not replace medical advice from your doctor. You should seek the advice of your doctor before starting any treatment or if you have any questions related to your health, physical fitness or medical condition.

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WHAT IS CPET? ADULT CONGENITAL HEART DISEASE PROGRAMME



THE HEART INSTITUTE
NATIONAL HEALTHCARE GROUP

The Heart Institute @ Alexandra Hospital • National University Hospital
Tan Tock Seng Hospital • NHG Polyclinics