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What is Exercise Stress Electrocardiography?

Overview

Exercise stress electrocardiography is an outpatient test which looks at the electrical pattern of the heart, also known as an electrocardiogram (ECG), in response to stress.

The most common form of stress test for the heart is exercising on the treadmill. The ECG is recorded before, during and after exercise under controlled conditions by attaching wires to the chest using electrodes.



Purpose of test

Coronary arteries are the blood vessels supplying blood to the heart. They can be abnormally narrowed in a medical condition called atherosclerosis. For patients with atherosclerosis, there may not be enough blood flow to the heart, which can result in chest pain, breathlessness, and abnormalities on the ECG. This may eventually lead to a heart attack.

The exercise stress ECG is most performed to:

- Investigate cause of chest pain
- Determine if the patient has evidence of significant coronary artery disease which can limit the blood flow to the heart
- Determine exercise-induced heart rhythm abnormalities
- Assess the blood pressure in response to exercise

What can I expect from the test?

The test is performed in the Non-Invasive Cardiac Laboratory. The preparation and test will take 30 to 45 minutes. You will be able to go home after a short 10-minute rest upon completion of the test.



Before the test

The test will be explained to you, and you will be required to sign a consent form.

To facilitate the attachment of ECG electrodes to the chest, male patients will be asked to remove their shirts. Female patients may be asked to change into special gowns for the purpose of attaching electrodes.

Before performing the exercise, your blood pressure and baseline ECG will be recorded.

During the test

You will then proceed with the exercise. The speed and incline of the machine will increase after every 3 minutes. The cardiac technologist will inform you when the next stage is due.

Throughout the test, your ECG and blood pressure will be monitored and you will have to report any symptoms.

To achieve more accurate test results, you will be asked to walk as much as you can so that a good amount of exercise is achieved.



After the test

You will be monitored for at least 6 minutes after the exercise to ensure that your heart rate and blood pressure has settled down.



Inform Your Doctor:

- 1. If you have conditions that make exercise difficult, such as backaches.
- 2. If you have a fever, a virus, or accompanying acute illness, you should not do the test.
- 3. If you are taking any medications for high blood pressure and/or heart disease which may slow down the heart rate. These medications should not be taken 24 to 48 hours prior to the test, except in specific clinical situations. Please check with your doctor regarding this.

Contributed by Nursing

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