



Treadmill Exercise Stress Electrocardiography Test

# What is a treadmill exercise stress Electrocardiography (ECG) test?



A treadmill exercise test involves walking on a treadmill as an Electrocardiogram (ECG) monitors your heartbeat. A doctor will look at your heart rate, rhythm and blood pressure to obtain a close analysis of your heart.

## What is the purpose of this test?

A treadmill exercise test is useful in evaluating your heart's response to exercise or stress, and is well proven to diagnose ischaemic heart disease (blocked heart arteries) in a non-invasive way. It can also determine your fitness level, irregular heart rhythm (if any) and monitor blood pressure in response to exercise.

## How should I prepare for the test?

Please consult your doctor if you have a medical history of backaches or problems with your limbs.



- There is no need to fast, but you should avoid taking a heavy meal two hours before the test.
- Wear loose-fitting clothing that is preferably two-pieced (e.g. shirt or blouse and pants) and shoes that are suitable for exercise.
- Men should shave their chest (if hairy-chested) before coming for the test.
- Avoid taking medication that slows down your heart rate, one to two days before the test. Such medication include atenolol, bisoprolol, carvedilol, metoprolol, nebivolol, verapamil or diltiazem. If you are unsure, please check with your doctor.
- Consent is required for this test.
- Reschedule your appointment if you are unwell (i.e. fever, dizziness).

## What to expect during the test?

A medical technologist will place electrodes on your chest and a blood pressure cuff will be attached to your arm.

You will be shown how to walk on the treadmill before you start the test. Every three minutes, the speed and slope of the treadmill will increase gradually. Throughout the test, your ECG and blood pressure will be monitored closely. You should inform the doctor or medical technologist if you feel:

- Discomfort or pain in the chest
- Giddy
- Generally unwell or unable to continue

The test will stop when your heart rate indicates that an adequate level of stress has been achieved or if there are changes in your electrocardiogram.



An average healthy person can walk for 9 to 12 minutes before the treadmill exercise test is stopped. You will continue to be monitored for another 5 to 10 minutes before the test is terminated.

Please inform your doctor if you have difficulty exercising (i.e. if you are unsteady, have backache or knee pain). This treadmill exercise test should not be performed if you are unwell, have uncontrolled or excessively high blood pressure, or are diagnosed with any other acute illnesses.



## What are the potential risks/complications with this test?

The treadmill exercise test is generally very safe and tolerable. Most complications, if any, are minor and this includes the situation where one sustains injuries from falling from the treadmill machine. Very rarely will a heart rhythm abnormality or heart attack occur during the exercise that will necessitate resuscitation and hospitalisation. Please be rest assured that you will be closely supervised by a trained medical personnel throughout the test.

### When will I know the results?

The supervising doctor can usually share the preliminary results of your test within the day itself, and you would be able to receive the final report at your next clinic appointment.



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