

What alternatives do I have to stress echo?
Your doctor would be happy to discuss any alternative investigations if they are applicable to you.

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Stress Echocardiogram



A test to assess the function of the heart and how the heart copes under stress

This leaflet has been written to provide information about a test to assess the function of the heart and how the heart copes under stress. This test can be performed in two ways and the doctor will decide on the day if you require an exercise stress echocardiogram (test performed on a treadmill or bike) or dobutamine stress echocardiogram (test performed using a drug).

Both procedures will be described below and we hope it answers some of the questions or concerns you may have about the test. It is not intended to replace talking with medical, nursing or technical staff.

Dobutamine Stress Echocardiogram (DSE)

DSE is a test that will allow your doctor to assess the function of your heart and whether it receives adequate blood supply under stress. It is often used in patients who cannot perform a treadmill exercise test due to physical limitations. As many patients find exercise difficult, a drug called Dobutamine is used to increase the heart rate in a similar way to exercise.

How is it done?

A small plastic tube will be inserted into a vein in your hand. Dobutamine will be given to you through this tube and will increase your heart rate causing it to beat faster. The medication will be increased until your target heart rate is reached but it will be stopped if you begin to experience any chest pain or breathlessness. As the drug is administered you will have an ultra sound scan of your heart (Echocardiogram). This involves placing gel on your chest and positioning a probe over your chest to obtain pictures of your heart.

Will I have any pain or discomfort during the test?

You may be aware of a fast heart beat during the test but it will not be painful.

How long does it take?

It usually takes about 40 minutes.

How do I prepare for the test?

You will be informed prior to the test if you need to stop taking any of your medication and when to stop eating and drinking.

What are the benefits of having the test?

The test will allow your doctor to assess the function of your heart and how it copes under stress. It is also useful in assessing damage to the heart muscle after a heart attack.

What are the risks involved?

The use of ultrasound to obtain images of the heart is very safe and there are no known risks involved. Dobutamine is a drug that is generally well tolerated but on occasion it may cause heart rhythm problems, chest pain or discomfort for a short time. The test is performed regularly in this hospital and the likelihood of a serious event occurring is very low. Very rarely it may lead to a more serious event such as unstable angina.

What can I expect after the test?

Once the medication is stopped the effects will start to reduce immediately and will completely resolve within 15 minutes. You will be asked to sit in the waiting area for about 30 minutes until the staff are satisfied that the effects of the medication have worn off. After this you will be able to go home and resume normal activities straight away. The results of the test will be sent to your Cardiologist (heart specialist).

Exercise stress echocardiogram

This test involves walking on a treadmill, the test will be performed by a clinical physiologist (specialist technician) and a doctor may be present. You will be attached to a monitor and an echocardiogram (heart scan) will be performed at the beginning and the end of the test. Your heart rate and blood pressure will be monitored during the test.

What should I wear for the test?

Please wear comfortable full flat shoes.

If possible please avoid wearing full length slips or dresses - a two piece outfit is preferable for example skirt or trousers and a top.

How is it done?

Sticky pads are placed on the chest. If you have a hairy chest the clinical physiologist will have to shave your chest in the areas where the sticky pads need to be attached so as they don't fall off during the test. They are placed on your chest and attached by wires to a special computer. You will be asked to step on to a treadmill and start walking. The treadmill is controlled by the computer and will record your heartbeat as you walk. The treadmill is set to gradually increase in speed and gradients (slopes) every three minutes. Your response is monitored continuously throughout the test and it is important to inform the staff if you get any symptoms. Normally you will be asked to exercise for as long as you can. Sometimes however the test may be stopped before then by the clinical physiologist or doctor. Your heart rate, blood pressure and heart rhythm will continue to be monitored for a short while after the test.

How long does it take?

This varies on how long you are able to exercise for, any symptoms you get and changes to your blood pressure and heart rhythm.

Are there any risks involved?

The test is performed under controlled conditions and is usually very safe. It is performed regularly in this hospital. There is also a slight risk of arrhythmia (disturbance in rhythm), chest pain or shortness of breath following or during the test.

What can I expect after the test?

You will be monitored for a short time, while you are resting after the test, after which you may go home. The results of the test will be sent to your cardiologist who will discuss them with you.