

STRESS ECHOCARDIOGRAPHY

What is an exercise stress test echocardiogram?

An exercise stress echocardiogram is a non-invasive test, commonly used to determine if coronary arteries are blocked. An ultrasound of the heart is performed before and after exercise (walking on a treadmill). This allows your doctor to assess how your heart responds to exercise. If you are unable to exercise, you may have an injection of a drug called dobutamine (instead of exercise) to make your heart work as hard as if you were exercising. By comparing your heart function before and after exercise, your cardiologist can check whether enough blood is getting to your heart or if a narrowing is restricting this supply.

Preparation for the test

You will be required to fast for two hours and wear comfortable walking shoes. Take your medications as usual unless you are told otherwise by your doctor. A gown can be provided, but it is advisable that you wear either shorts or a skirt to walk in. Loose clothing with a separate top is best.

Please do not wear antiperspirant or talcum powder on your chest area.

How is a stress test performed?

Firstly, a highly qualified echo technologist will perform an echocardiogram of your heart. This will assess the heart function at rest. The technician will put a thick gel on your chest, then the technician will use a transducer to send and receive sound waves. The transducer will be placed directly on the left side of your chest, over your heart. The technician will press firmly as the transducer is moved across your chest and you will be asked to briefly hold your breath.

Secondly, the exercise stress test is performed using a set protocol. Starting with an easy walk and then progressing every 1-3 minutes with an increase in speed and gradient, depending upon your level of fitness. You should exercise as long as possible to ensure your test is accurate. Throughout the test, the ECG, pulse, and BP are continually monitored. The stress test continues until you are too fatigued to continue or until symptoms (chest pain, shortness of breath, or lightheadedness) prevent further exercise, or until changes in the ECG or BP indicates a cardiac problem.

After you have finished exercising, you will lie down on an examination table bed and more echocardiography pictures will be taken. You will be asked to breathe out and hold your breath briefly several times

so the images can be recorded. It is very important that you do your best to hold your breath during this part of the examination because there is only 1-2 minutes to obtain these images before your heart slows down to a normal rate.

Dobutamine stress echocardiogram

If you have difficulty walking, the doctor may decide to use a drug called "Dobutamine". This drug copies the effect of exercise on the heart and makes the heart work faster and harder.

This procedure is performed in hospital. A small needle is inserted into the back of your hand. The Dobutamine is given slowly through this needle over the next 20 minutes.

If you feel unwell you should inform the staff at once.

Side effects of Dobutamine:

You may suffer:

- ❖ Headache, nausea, vomiting, restlessness, muscle cramps or weakness, chest pain, shortness of breath, dizziness, palpitations or rash.



What are the risks of this procedure?

Complications are rare during both exercise and dobutamine stress echocardiography, the most common risks include:

- Chest pain which can be treated with medication and stopping the test.
- Development of fluid in the lungs which may also require medication and cessation of the test.
- An abnormal heart beat or "arrhythmia" which may settle with or without medication and once again may result in ceasing the stress test.

There is a risk of heart attack in 1:2,500 people and a risk of death in 1:10,000 people, although this risk is greater if there is a known heart condition.

If you have a history of a previous/recent heart attack, tears in the arteries, recent fluid or clots in the lungs, severe heart valve disease, heart arrhythmias, palpitations, or a recent increase in chest pain, you should advise the staff before you commence the test. You will also be asked to bring your medications so that these can be accurately noted prior to the test.

CONSENT FORM

Prior to the test you will be asked to sign a consent form in which the information is outlined. It is important that after reading the consent form you feel that:

- You are familiar with the procedure itself, what is required of you and the information that is to be obtained.
- That you are aware of the risks and benefits of the procedure as outlined in the information form.
- You should ask any questions or raise any concerns you have about your condition, the test, or the treatment at the time that you sign the consent form.
- That your doctor will undertake any treatment including medication or procedures required should there be any complications or immediately life threatening events.
- This test is for the assessment of your condition, but may not necessarily improve the condition or its outcome.

After reading the information form, if you have any questions regarding the procedure, please do not hesitate to discuss these with the cardiologist prior to the procedure. Then, when you are satisfied, the consent form can be signed.

I request to have the cardiac exercise stress test procedure.

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Name of Patient: _____

Signature: _____

Date: _____

Signature of Doctor: _____