



## PATIENT INFORMATION SHEET

### Exercise Stress ECHO test

A Stress ECHO combines a standard stress ECG test with a cardiac ultrasound (Echocardiogram) of the left ventricle of the heart before and immediately after walking on a treadmill. We use this test to look for coronary artery disease using a combination of the ECG recorded throughout the test and the recovery period and the echocardiogram. Combining the echocardiogram with the exercise ECG substantially improves the value of the test. The test takes approximately ½ an hour to perform and requires both a highly trained technician (cardiac sonographer) and a cardiologist.

### Why is it done?

- **Diagnosis of Coronary Disease and Estimation of Risk.** The test adds important information to the history and examination findings. It is used in those with both stable and unstable coronary disease. The cardiologist interprets the findings in the context of your case. It helps them to define your risk level.
- **Assessing the importance of heart valve disorders.** In this situation, we combine all of the information from the stress ECHO with additional ultrasound measurements we make before and after exercise which assess how the heart copes with the stress of exercise.
- **Monitoring effects of treatment.** The test may be performed before and after treatments such as drug treatment of angina or heart failure, coronary stenting procedures and heart surgery to confirm the effectiveness of treatment in the short or long term.

### How is it done?

The test is in three parts, a resting examination, the treadmill exercise test and the recovery period. The first part involves attaching ten electrodes to the skin after gently removing the dry hard skin in that area with an abrasive pad. The sonographer will ask you to lie on your left side on an examination bed and will perform a resting echocardiogram. The pictures are obtained by applying the ultrasound probe to the skin over the heart with a small amount of water soluble gel which allows the inaudible sound beam (ultrasound) to take a picture of the left ventricle of the heart and make other measurements, such as blood flow, if needed.

Once these pictures have been obtained, the sonographer will ask you to get up and walk over to the treadmill where a blood pressure cuff is placed on the arm- usually the right arm- and attached to an automatic BP recorder which records blood pressure throughout the test.

The cardiologist supervises the remainder of the test. During the next phase you will be asked to walk on a treadmill, the speed and inclination of which will be adjusted according to a protocol with a target exercise level and heart rate which is age and sex dependent. If you experience any symptoms, particularly, chest, throat, jaw or arm discomforts, breathlessness or light headedness you must mention it to the cardiologist performing the test.

The test is stopped for various reasons which include having achieved a maximal heart rate for age, having developed limiting symptoms which stop you or the cardiologist judges that the test should be terminated. You will be asked and helped to move as quickly as possible back to the examination couch where the same series of ultrasound images of the heart will be obtained promptly. You may be asked to hold your breath for a short period during this part of the test. You need only stop breathing for a short period of time.

### What clothing and other preparations do I need?

There is no need to fast but clearly we would not wish to perform the test shortly after a large meal. Certain medications like betablockers (see list) and calcium blockers are stopped prior to the test but most other medications including diabetic and asthma medications are continued and you should bring your asthma puffers with you on the day.

You need to walk in appropriate flat shoes and comfortable loose clothing. We offer all patients a medical examination gown to wear opening at the front.

### Medications which may affect the test (Discuss with Doctor before the test)

- Betablockers: Atenolol (Tenormin, Noten), metoprolol (Betaloc, Minax), carvedilol (Dilatrend, Kredex, Dilasig), bisoprolol (Bicor), sotalol (Sotacor, Sotahexal), labetalol (Presalol, Trandate), pindolol (Visken, Barbloc), propranolol (Inderal). On occasion you may be asked to stop the medication for a couple of days.

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### Risks of the test

This is a non-invasive and very low risk test. There is less than one in 10,000 risk of dying or having a heart attack during or immediately after the test. The amount of exercise you will be asked to do will be about the most you do during daily life but is not intended to be more in most cases. A change in heart rhythm can occur during the test which is typically short lived and not serious in most cases in which it does occur. If you have any symptoms during the test which concern you this needs to be mentioned to the doctor performing the test.

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