

## Stress Echocardiogram

### What is a stress echocardiogram (stress echo) ?

A stress echocardiogram is a form of a stress test to determine how well the heart functions under the stress of exercise. The test helps to diagnose the presence or absence of coronary artery disease (blockage of the arteries that supply the heart with oxygen). An echocardiogram is performed before exercise, immediately after exercise, and then again five to seven minutes after the cessation of exercise.

A stress echocardiogram is not painful, but it is physically demanding. You may experience some degree of fatigue.

There is a very small risk of complications (heart attack, irregular heart rhythm). Everything is done to prevent such an occurrence. Medical staff and emergency equipment are immediately available to assist in the event of an emergency.

### Special Instructions before the test

To help ensure accurate results, you should take the following steps in preparation for a stress echocardiogram:

- Refrain from strenuous activity for 12 hours before the test.
- Do not eat, drink, or smoke for two hours prior to the test. Patients who have used Viagra (sildenafil citrate) within the 24 hours prior to the test or Cialis (Tadalafil) within 48 hours, should tell the technician. It may compromise the safety of the test.
- Make your last meal light and without tea, coffee or alcohol.
- If you are currently taking any heart medication, check with your doctor. He or she may ask you to stop certain medications a day or two before the test. This can help obtain more accurate tests results.
- Before the test, you will be given an explanation of the test and you will be asked to sign a consent form. Feel free to ask any questions about the procedure.
- Wear comfortable walking shoes and clothing for the test.
- Refrain from eating at least two hours before the test. This will prevent the possibility of nausea, which may accompany vigorous exercise after eating.

- Several areas on your chest and shoulders will be cleansed with alcohol and an abrasive pad will be used to prepare the skin for the electrodes (small sticky patches). Men may need to have areas of their chest shaved, to ensure that the electrodes stay in place.

#### **How is the test conducted and what can I expect ?**

- The test is divided into three parts. First, a resting echocardiogram is performed. Next, you will walk on a treadmill, then another echocardiogram is performed while your heart is still beating rapidly after exercise.
- Resting echocardiogram - Adhesive electrodes are applied to the chest area after the sites have been cleaned with alcohol, shaved (if necessary), and mild abrasion applied.
- You will then be asked to lie on an exam table on your left side. To improve the quality of the pictures, a colorless gel is applied to the area of the chest where the transducer will be placed. Pictures of your heart will then be recorded. After your resting pictures are recorded a resting electrocardiogram (ECG) and blood pressure will be taken.
- Exercise test - You will then be asked to walk slowly in place on a treadmill. The speed and incline of the treadmill are then at set intervals. Your blood pressure and electrical activity of the heart is monitored throughout the test. It is very important to tell the nurse if you experience any symptoms such as chest pain, dizziness, unusual shortness of breath or extreme fatigue. The nurse will stop the test when you reach your peak heart rate, when you get too tired, or have significant symptoms.
- Once the treadmill is stopped - you will be asked to very rapidly return to the examining table, and lie once again on your left side. The sonographer will then record a second set of images while your heart is still beating rapidly.
- Your blood pressure and ECG are monitored for five to ten minutes after exercise.
- A final set of echo pictures is acquired before the end of the test.
- The ECG tracings and the echo images are reviewed by a cardiologist, and a report is sent to the patient's doctor, who will discuss the results with them.
- **The effectiveness of a stress echocardiogram relies on the effort made by you. It is very important that you walk for as long as you can or until the test is stopped by the nurse.**

#### **After The Test**

- The doctor doing the test will read and interpret the results of your test. Your cardiologist or referring physician will then go over the results of your stress echocardiogram
- If the test is abnormal or inconclusive, then additional tests may be ordered.

- The information gained from the stress echo helps your doctor make an accurate diagnosis and develop a treatment plan that is best for you.