Alfi Moris Beshay, MD, MSc, FRCP(C) Internal Medicine & Cardiovascular Disease

Exercise Stress Test – Patient Information Sheet

Definition

• An exercise stress test is a screening tool used to test the effect of exercise on your heart.

Why is the test performed?

- Reasons why an exercise stress test may be performed include:
- Chest pain (to check for coronary artery disease narrowing of the arteries that feed the heart muscle). Your angina is becoming more severe or is happening more often.
- Post heart attack, post angioplasty or post heart bypass surgery.
- You are going to start an exercise program and you have heart disease or certain risk factors, such as diabetes. To identify heart rhythm changes that may occur during exercise.
- To further test for a heart valve problem (such as a ortic valve or mitral valve stenosis)
- There may be other reasons why your health care provider asks for this test.

How is the test performed?

- The technician will place 10 flat, sticky patches called electrodes on your chest. These are attached to an ECG monitor that follows the electrical activity of your heart during the test.
- You will walk on a treadmill. Slowly (usually every 3 minutes), you will be asked to walk faster and on an incline. It is like walking fast or jogging up a hill.
- While you exercise, the activity of your heart is measured with an electrocardiogram (ECG), and your blood pressure readings are taken.
- The test continues until: You reach a target heart rate. You develop chest pain or a change in your blood pressure that is concerning. ECG changes show that your heart muscle Is not getting enough oxygen. You are too tired or have other symptoms, such as leg pain, that keep you from continuing.
- You will be monitored for 10-15 minutes after exercising, or until your heart rate returns to baseline. The total time of the test is around 60 minutes.

How to prepare for the test?

- Do not eat, smoke, or drink alcohol or caffeinated beverages for at least 4 hours before the test.
- Continue taking all your regular medications on the day of the test with small sip of water. Diabetics on insulin or oral hypoglycemics, patients on beta-blockers will be given special instructions at the time of scheduling regarding the use of these medications depending on the reasons to do the test. Please ensure that you received those instructions.
- Wear comfortable clothing (short or sweatpants with shirts or blouse) and walking or jogging shoes. Men are usually bare-chested during the test, while women often wear a bra or hospital gown. Do not apply lotions, oils, or powders on your chest, shoulder, or hip areas. Remove all your jewelry from your neck, arms and or wrist.

How will the test feel?

- The preparation of the electrode sites on your chest may produce a mild burning or stinging sensation.
- The blood pressure cuff on your arm will be Inflated every few minutes, producing a squeezing sensation that may feel tight.
- You will start walking on a treadmill or pedaling a stationary bicycle. The pace and incline of the treadmill (or the pedaling resistance) will slowly be increased.
- Sometimes, people experience some of the following during the test: chest discomfort, dizziness, palpitations, shortness of breath. You should tell the attendant what you feel at all times.

What the risks are?

- This is a non-invasive and has a very low risk. There is less than one in 10,000 risk of dying or having a heart attack during or immediately after the test. Some patients may have chest pain or may faint or collapse.
- 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.

Special considerations

• If the treadmill exercise stress test results are equivocal, or you could not reach your target heart rate (according to your gender and age), you may be asked to come back to do imaging stress test with exercise or medications based on the specific of your situation.