

## **WHAT IS AN EXERCISE STRESS TEST? (ALSO KNOWN AS EXERCISE ECG TEST)**

An exercise ECG test combines an electrocardiogram (ECG) with an exercise test. It is done to assess how well your heart responds to the demands of physical activity. It can help detect heart problems that may not be apparent while you are at rest.

During an exercise ECG test, you walk on a treadmill while your heartbeat is monitored. (Also referred to as Cardiac stress test, exercise tolerance test and treadmill test)

### **What does an Exercise ECG stress test show?**

Even if your heart works well at rest, it may not get enough blood supply when it has to work harder. Doctors use the exercise ECG test to assess how well your heart works during exertion. By examining the ECG tracing, the doctors are able to diagnose reduced blood flow to the heart muscle, abnormal heart rhythms, and other conditions. In particular, they study the following:

- How long were you able to exercise? Generally, people with a healthy heart, and in good physical condition, are able to exercise longer.
- Did you have any symptoms? It is quite normal to feel tired and short of breath during strenuous exercise. However, if you develop chest discomfort or become extremely short of breath this may indicate a heart problem.
- What happened to your heart rate and blood pressure? Both the heart rate and blood pressure normally rise during exercise. An abnormal heart rate (too fast, too slow) or a fall in blood pressure during exercise may indicate heart disease.
- What did the ECG show? Certain patterns on the ECG tracing may indicate that the heart muscle is not getting enough oxygen-rich blood. Other times, the ECG during exercise may show abnormal heart rhythms.

### **Why is the exercise ECG test done?**

An exercise ECG test may be done:

- To diagnose the cause of unexplained chest pain
- To detect reduced blood flow to the heart muscle, which may indicate coronary heart disease
- To evaluate how well heart treatments (such as medications or procedures) are working
- To look for abnormal heart rhythms that may develop during exercise to determine the heart's exercise capacity

### **Preparing for the test**

- ❖ Usually, you will be asked not to eat, drink or smoke for at least 6 hours before the test (fasting). If you have diabetes and take medication for it, you will need special instructions.
- ❖ If you take heart medications, check with your doctor when you should schedule the test. Your doctor may ask you to stop certain medications a day or two before the test.

- ❖ Wear comfortable clothing and shoes that are suitable for exercise. Women usually wear a loose-fitting blouse or hospital gown.
- ❖ The procedure will be explained to you and will be asked to sign a consent form. Feel free to ask questions you may have.

### **What happens during the test?**

Several electrodes (small sticky pads) will be placed on your chest to obtain your ECG and monitor your heart beat during the test. Men may need to have several areas of their chest shaved to ensure that the electrode stay in place.

A blood pressure cuff will be wrapped snugly around your arm so that your blood pressure can be checked every few minutes during the test.

Men usually do not wear a shirt during the test, and women generally wear a bra and a lightweight blouse or a hospital gown.

You then walk on a treadmill. The treadmill moves slowly at first, and then the speed and incline gradually increase.

Your blood pressure will be checked often and your ECG will be observed for abnormal patterns. You will be asked by the technician how you are feeling. Report any symptoms, especially chest discomfort, dizziness, or severe shortness of breath.

The test continues until you reach your “target” heart rate (based on your age). You will be encouraged to exercise until you are exhausted. It is normal for your heart rate, breathing rate and perspiration to increase. The test may end when you experience significant symptoms or become too tired. Other times, the test may be stopped when the ECG shows abnormal patterns or when enough information has been obtained.

After the exercise portion of the test is over, you will be helped to a chair. Your blood pressure and ECG will be monitored for another 5 to 10 minutes while you recover. The technologist will then remove the electrodes and clean the sites.

The exercise portion of the test usually lasts for 5-15 minutes. However, you should allow about an hour for the entire test, which includes preparation, the exercise portion and the recovery period.

### **Is the exercise ECG test safe?**

The exercise test is generally safe. A small amount of risk does exist, however, because the heart is stressed. Possible rare complications include abnormal heart rhythms and a heart attack. Trained personnel are present to handle any emergency.

### **Your Results**

Your doctor will discuss the test result with you during a future office visit.

