

Exercise ECG Test

What Is an Exercise ECG Test?

An exercise ECG test allows doctors to learn how well your heart functions when it is made to work harder. This test can help detect heart problems that may not be apparent at rest.

The exercise ECG test is done while you walk on a treadmill or pedal a stationary bicycle. During the test, an electrocardiogram (ECG or EKG) records the electrical activity of your heart.

[Other terms used to describe the exercise ECG test include: cardiac stress test, exercise tolerance test, and treadmill test.]

What Does It Show?

Even if your heart functions well at rest, the blood supply to the heart may not be sufficient to meet its needs when its workload is increased. The exercise ECG test is used to see how well your heart functions during exertion. Throughout the test, several types of information are being recorded:

- 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 significant symptoms? It's normal to feel tired and short of breath during strenuous exercise. However, if you develop chest pain or 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 in the ECG tracing may indicate that the heart muscle is not getting enough oxygen-rich blood. Sometimes, the ECG during exercise shows abnormal heart rhythms.

Doctors may order an exercise test to: diagnose the cause of chest pain; determine the level of heart function in people with heart disease; evaluate the efficacy of treatments such as medications or heart procedures; look for abnormal heart rhythms that may develop during exercise; and determine the level of exercise that is right for you.

Preparing for the Test

- Do not eat or drink for 3 hours prior to the test. This will help prevent the possibility of nausea, which may accompany vigorous exercise after eating. [If you have diabetes and take medication for it, get special instructions].
- Avoid any strenuous physical activity on the day of the test. If you are a smoker, don't smoke for at least 3 hours before the test.
- If you are currently taking any heart medications, check with your doctor. He or she may ask you to stop certain medications a day or two before the test. This can help get more accurate test results.

- Wear loose and comfortable clothing that is suitable for exercise. Men usually don't wear a shirt during the test; women generally wear a loose-fitting blouse or hospital gown. Also, wear comfortable walking shoes or sneakers.
- Before the test, you'll be given a brief explanation of the test and you'll be asked to sign a consent form. Feel free to ask any questions about the procedure.
- Several electrodes (small sticky patches) will be placed on your chest to obtain an ECG. Men may need to have areas of their chest shaved, to ensure that the electrodes stay in place.

What Happens During the Test?

The exercise ECG test is generally performed at a hospital, test center, or doctor's office.

A technician (or a nurse) will place several electrodes on your chest, to allow recording of the ECG during the test. The electrodes are connected by wires to an ECG machine. A cuff will be applied to your arm to monitor blood pressure.

You will be shown how to step onto the treadmill and how to use the support railings to maintain your balance. The treadmill starts slowly, then the speed and incline are increased gradually. [If you pedal a stationary bicycle, it feels easy to pedal at first, then it gradually gets harder.]

Your blood pressure will be checked every few minutes, and your ECG will be carefully watched for abnormal changes.

Be sure to report any symptoms, such as chest pain or discomfort, dizziness, or severe shortness of breath. Try to exercise for as long as you are able to, because it increases the accuracy of the test.

The test usually continues until you reach a "target" heart rate based on your age. 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 sufficient information has been obtained.

After the exercise portion of the test is over; you'll be helped to a chair or a bed. Your blood pressure and ECG will be monitored for another 5 to 10 minutes while you recover. The technician will remove the electrodes and cleanse the electrode sites.

The exercise portion of the test usually lasts for 5 to 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 Test Safe?

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

Your Test Results

The doctor conducting the test may be able to give you preliminary test results before you leave. Or, your own doctor will discuss the test results with you during a future office visit.

The information gained from the exercise test helps your doctor make an accurate diagnosis and develop a treatment plan that's best for you.