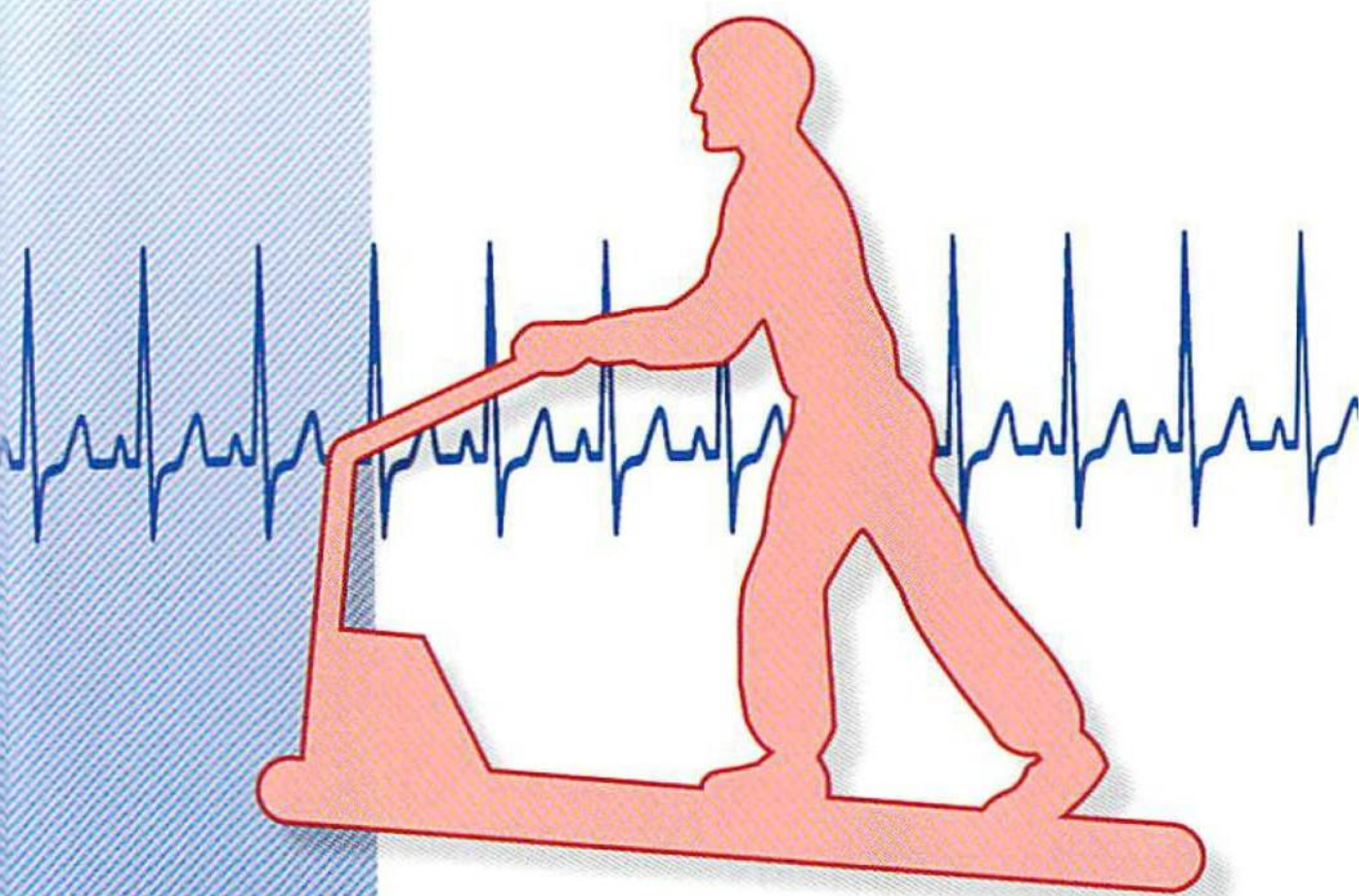


# **Exercise ECG Test**



**A Patient's Guide**

## What Is an 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 either walk on a treadmill or pedal a stationary bicycle while your heartbeat is monitored.

(*Other terms* used to describe an exercise ECG test include: cardiac stress test, exercise tolerance test, and treadmill test.)

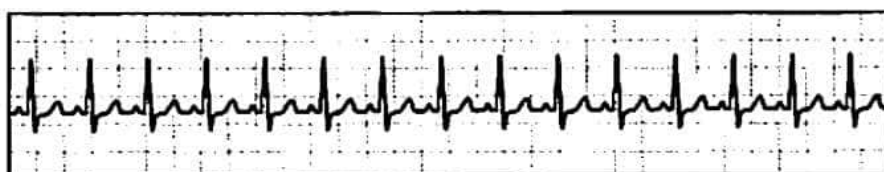
## What Does It Show?

An **electrocardiogram (ECG)** records the electrical activity of your heart. The heart's electrical impulses cause a needle to trace the heartbeat as a wavy line.

By examining the ECG tracing, doctors are able to diagnose reduced blood flow to the heart muscle, abnormal heart rhythms, and other heart conditions.



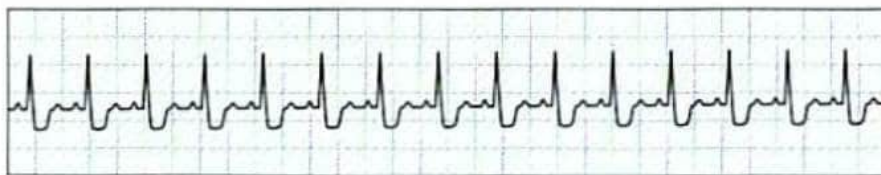
An ECG at rest showing a normal heart rhythm.



An ECG during exercise showing a faster heart rhythm.

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. 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's quite 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 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.



An ECG showing an abnormal pattern that suggests the heart muscle is not getting enough blood.

## Why Is the 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

- Generally, you'll be asked not to eat, drink, or smoke for at least 3 hours before the test. 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 schedule the test. He or she 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 you will be asked to sign a consent form. Feel free to ask any questions you may have.

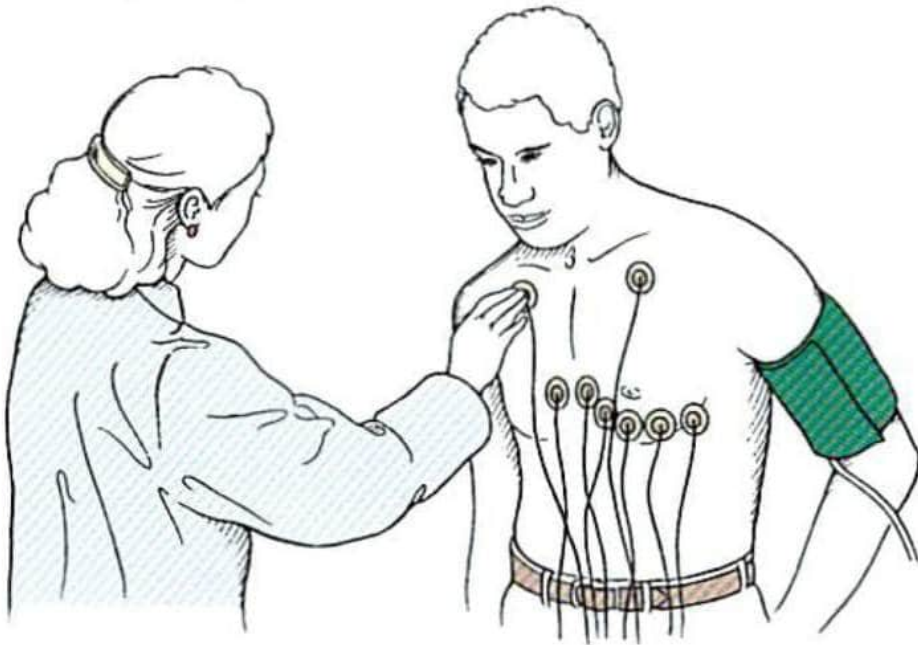
## What Happens During the Test?

The exercise ECG test may be done at a hospital, test center, or doctor's office. It is performed by a doctor, a nurse, or a technologist.

Several **electrodes** (small sticky pads) will be placed on your chest to obtain your ECG and monitor your heartbeat during the test. Men may need to have several areas of their chest shaved to ensure that the electrodes 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 don't wear a shirt during the test, and women generally wear a bra and a lightweight blouse or a hospital gown.

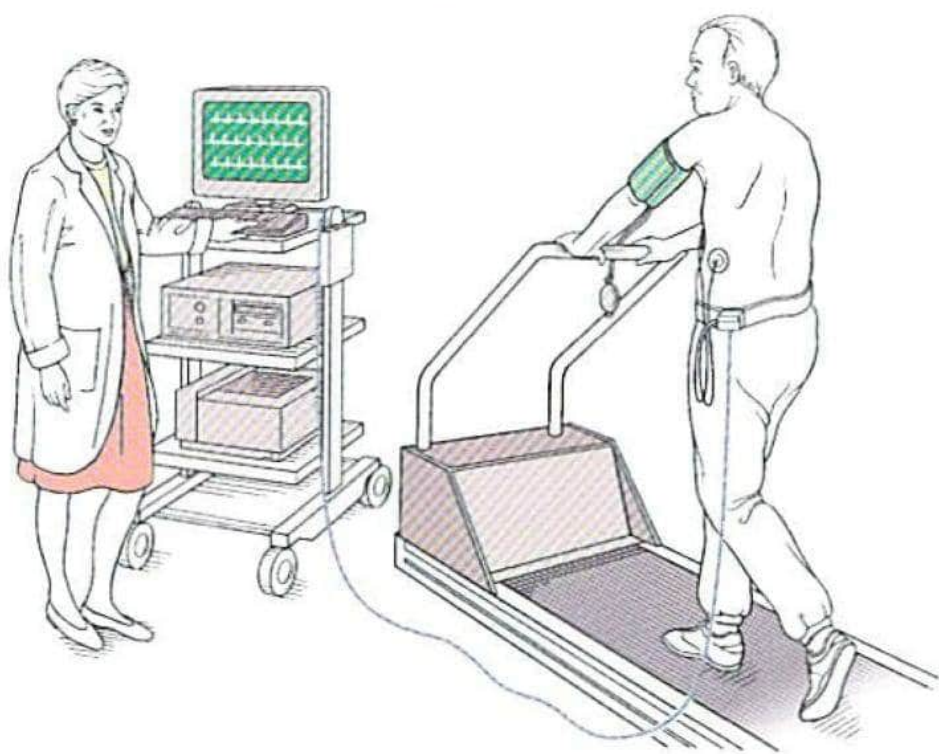



You then walk on a treadmill or pedal a stationary bicycle. The treadmill moves slowly at first, then the speed and incline gradually increase. A stationary bicycle feels easy to pedal at first, then it gradually gets harder.

Your blood pressure will be checked often and your ECG will be observed for abnormal patterns.

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 can; the more you exercise, the more accurate the test will be.

The test continues until you reach your “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 enough 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 technologist will then remove the electrodes and cleanse the electrode sites.

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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 the heart is stressed. Possible *rare* complications include abnormal heart rhythms and a heart attack. Trained personnel are there 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 accurately diagnose your condition and develop a treatment plan that's best for you.

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