

Education

Electrocardiogram (ECG or EKG)

What is an electrocardiogram (ECG or EKG)?

An electrocardiogram (ECG or EKG) is a recording of the electrical activity of the heart.

Each beat of the heart is started by an electrical impulse from special cells in the right upper chamber of the heart. The electrical impulse travels to other parts of the heart and causes the heart to squeeze and pump blood. The electrical signals can be detected on the body surface. The ECG records these electrical signals. With the ECG your health care provider can study the pattern of the signals. Many different diseases and conditions affect the ECG pattern.

When is it used?

The ECG is used to record heart rhythms. Your health care provider can diagnose heart problems by interpreting patterns of heartbeats and rhythms. An ECG can show:

- abnormal heartbeats and rhythms
- thickening of the heart muscle caused by high blood pressure or other diseases
- evidence of a current heart attack and the effects of old heart attacks
- parts of the heart that are not getting enough blood
- evidence of chemical imbalances in the body.

How do I prepare for an electrocardiogram?

No preparation is necessary unless your health care provider gives you special instructions.

What happens during the procedure?

A resting ECG is a painless procedure that takes less than 5 minutes. It can be done in your health care provider's office, clinic, or hospital. Small sticky patches or suction cups are placed on your chest, wrists, and ankles. The disks are connected to a machine that records electrical impulses of the heart. The recording is printed on paper for your health care provider to interpret. The ECG gives your health care provider 12 views of your heart's electrical activity.

A lightweight portable machine called a Holter monitor may be used to take a recording over 1 to 3 days. This shows how your heart works during regular activity.

What are the benefits of an ECG?

The ECG is a simple, inexpensive, easily performed test that gives a lot of information to your health care provider about the way your heart is working. It can speed up the diagnosis of a heart attack so treatment can be started quickly. It can tell if the electrical system is working properly or if you may need medicines or devices like a pacemaker to help control your heart rhythm.

Are there any risks to an ECG?

Your skin might be irritated by the adhesive on the electrode patches, but any skin irritation quickly disappears when the patches are removed.

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