



# Electrocardiogram

## Your quick guide



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British Heart  
Foundation

Coronary heart disease is the UK's single biggest killer.

For over 50 years we've pioneered research that's transformed the lives of people living with heart and circulatory conditions. Our work has been central to the discoveries of vital treatments that are changing the fight against heart disease.

But so many people still need our help. From babies born with life-threatening heart problems to the many Mums, Dads and Grandparents who survive a heart attack and endure the daily battles of living with heart failure.

Join our fight for every heartbeat in the UK. Every pound raised, minute of your time and donation to our shops will help make a difference to people's lives.

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## What is an ECG?

An ECG or electrocardiogram is a test to look at the electrical activity of your heart. It's quick and painless and can be done at your GP surgery or at the hospital. The most common reason for having an ECG is if your doctor thinks you may have a heart condition. An ECG is often needed before you have any operation or as part of a general health check.



## How is an ECG done?

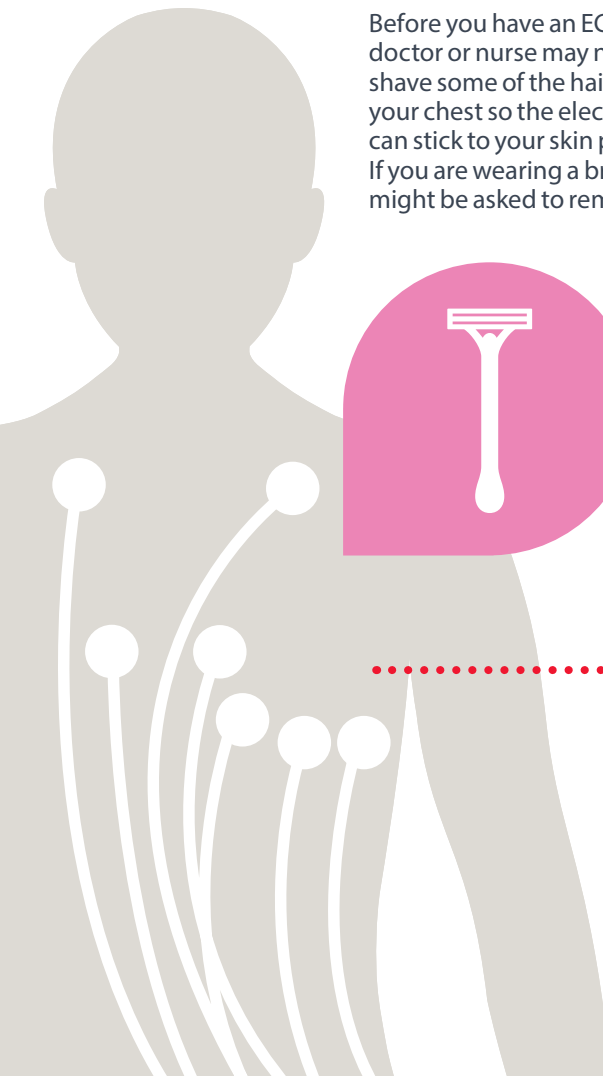
You will need to lie as still as possible during the test as any sudden movements will make it hard to get a good quality recording. The test only takes a few minutes in total.

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### Having an ECG

Small, sticky patches (called electrodes) are put on your chest and sometimes on your wrists and ankles.

These electrodes are connected to a number of leads which link up to the ECG machine.

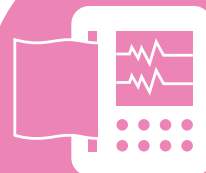


Before you have an ECG, your doctor or nurse may need to shave some of the hair from your chest so the electrodes can stick to your skin properly. If you are wearing a bra, you might be asked to remove it.



### **ECG recording**

The ECG machine records the electrical activity of your heart for about six seconds.



### **ECG print out**

The recording looks like a number of wavy lines that print onto a piece of graph paper.





## Amy's story

Amy had heart surgery at 14 to close a large atrial septal defect (a hole between the top two chambers of her heart). She returns to the hospital regularly for checkups.

"I've had pretty much every type of ECG going and they're all as painless and minor as each other.

I had to wear a monitor for 24 hours but I was pleased I could remove it to shower."



“I was worried about the exercise stress test, mainly because of the name! **But the nurses were lovely and didn’t push me to go further than I felt I could manage.**”

Amy, campaigner



## What can an ECG show?

An ECG can help show if your heart is beating in an abnormal rhythm or if your heart is beating too fast or too slow (problems with your heart rate). An ECG can also help show if there are any problems with your heart’s valves or if you have any signs of coronary heart disease. For example it could show whether you have angina or have had a heart attack.

Sometimes, even if your ECG is normal you could still have a problem with your heart and you may need more tests. But an abnormal ECG doesn’t mean you definitely have a problem either.

**An ECG on its own isn’t always enough to diagnose a heart condition without you having other tests.**



## Different types of ECG

The number of leads on an ECG machine can vary. A standard ECG machine looks at the electrical activity of your heart from 12 different angles. This is called a 12 lead ECG.

Sometimes, you may only need an ECG with three or five leads – for example during an operation or in an ambulance. The type of ECG you need will depend on what your doctor or nurse wants to find out from the recording.

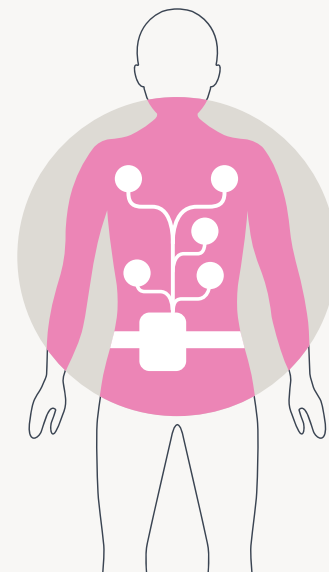
### Exercise stress test

Another test which uses an ECG is an exercise ECG (sometimes called an exercise stress test). The ECG is done while you are exercising – either walking on a treadmill or cycling on an exercise bike. This helps your doctor to see how well your heart works when it's put under pressure. The test can help show if your heart is not getting enough blood and oxygen when you exercise. This can be a sign of coronary heart disease.



### Holter monitor

Sometimes, a doctor may want you to wear a much smaller ECG monitor for up to seven days. This monitor can record your heart rhythm and rate continuously. It's often used when you're having symptoms which come and go at different times during the day, such as palpitations (feeling your own heart beating) or dizzy spells.



Your doctor will want to know if you feel any symptoms – such as chest pain – at any time during the test. If you feel unwell in any way the test will be stopped.



## Use this space to make notes for discussions with your doctor.

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## Join us in the fight for every heartbeat.

**For 50 years the British Heart Foundation has been funding life-saving heart research. Our work has been central to the discoveries of vital treatments that are changing the fight against heart disease. But we need your support to continue this fight.**

**Visit [bhf.org.uk](http://bhf.org.uk) to make a donation or find out more.**

## For more information

You can order more information on ECGs, including:

Tests for heart conditions (booklet)

The Road Ahead: Your guide to heart tests and treatments (DVD)

### **bhf.org.uk/tests**

To order our booklets or DVDs:  
call **0300 200 2222**  
email **[orderline@bhf.org.uk](mailto:orderline@bhf.org.uk)**  
or visit **[bhf.org.uk/publications](http://bhf.org.uk/publications)**

### **Contact**

For more information visit the British Heart Foundation website **[bhf.org.uk](http://bhf.org.uk)**

### **Heart Helpline 0300 330 3311**

(a similar cost to 01 and 02 numbers)  
For information and support on anything heart-related.