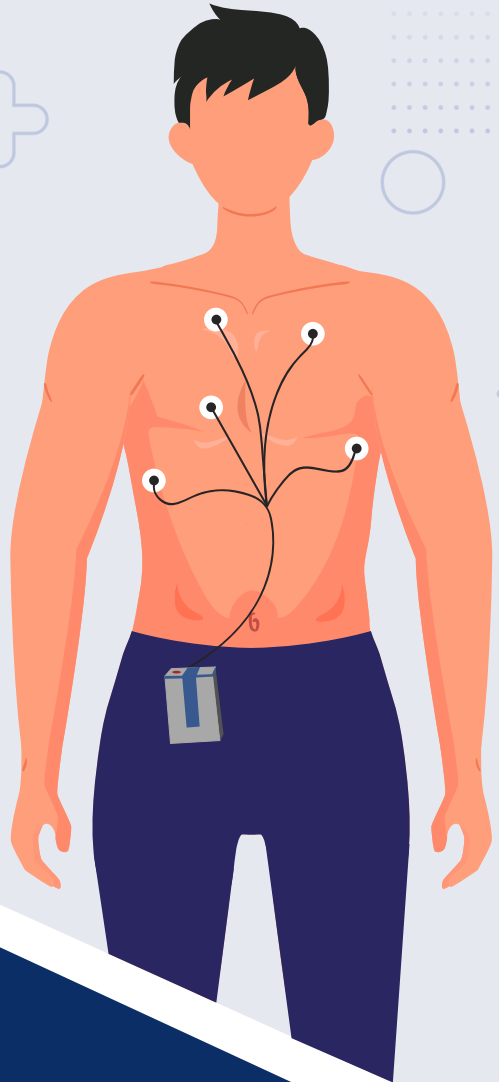




National University  
Heart Centre  
Singapore



# Ambulatory Electrocardiogram (ECG) - Holter Monitoring

# What is an Ambulatory ECG test?

An electrocardiogram, or ECG, is a recording of the heart's electrical activity. Routine ECGs record your heartbeats occurring within 10 seconds.

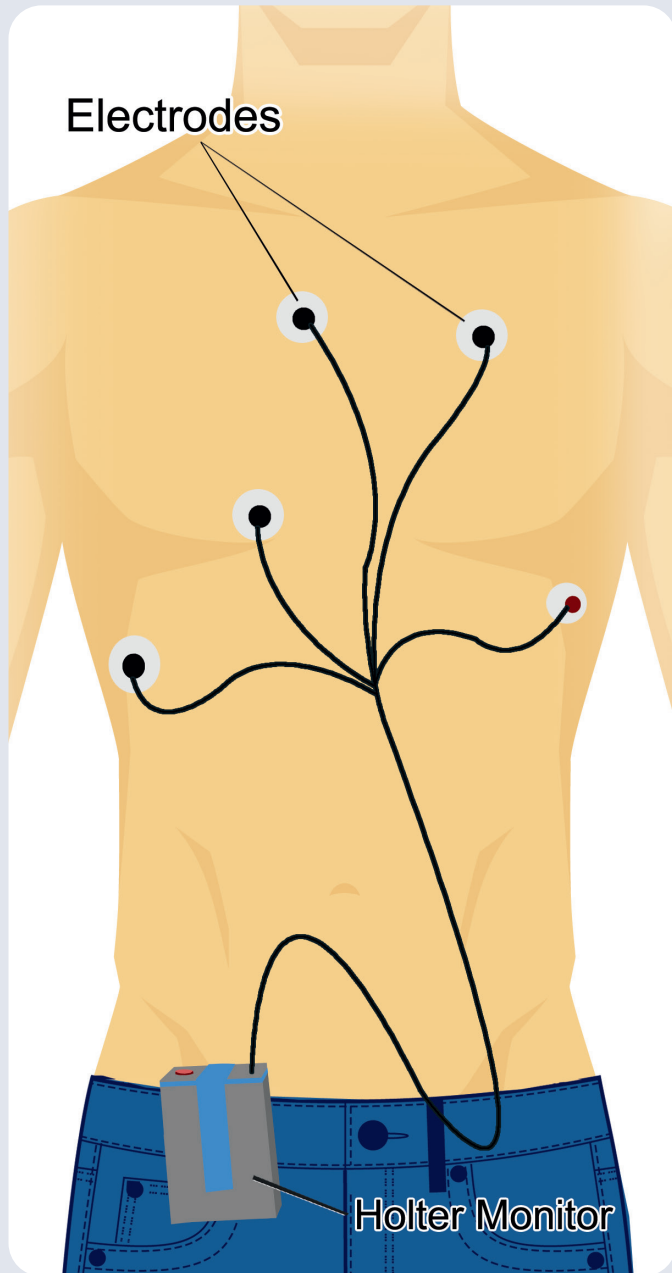


7-Day Holter recorder (left)  
24-Hour Holter recorder (right)

An Ambulatory ECG monitoring test, also called the Holter monitoring test, monitors your heart when you are doing your normal activities. It records heartbeats over an entire day (24-Hour Holter) or up to 7 days (7-Day Holter). These beats are then analysed to determine any abnormal heart rates and rhythms (arrhythmias).

Your doctor may recommend this test if he or she suspects that you are having bouts of abnormal heart rate or rhythm such as, if you have palpitations or episodes of dizziness. Some arrhythmias 'come and go', and may only last seconds or minutes. They may not be present at the time of examination by the doctor. So, the test may help to detect an arrhythmia.

Set-up of the monitoring equipment on a patient.



## What is the purpose of this test?

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Prolonged monitoring is ideal for detecting intermittent rhythm abnormalities by studying the effect of activities or time of day on the heart rhythm, or by simply obtaining more detailed information about the heart's behavior. It may be used to assess whether abnormal heart rhythm or rate could be the cause of certain symptoms such as giddiness, fatigue, palpitation, shortness of breath, chest pain or a fainting spell.

When you have symptoms during the recording, it is very useful to know what your ECG looks like at that very precise moment. Besides rhythm disturbances, the Ambulatory ECG monitoring test can detect periods when the heart is suffering from the effects of inadequate blood supply, or myocardial ischaemia. When you are asleep, any heart rhythm abnormality will also be recorded.

## How is the test conducted?

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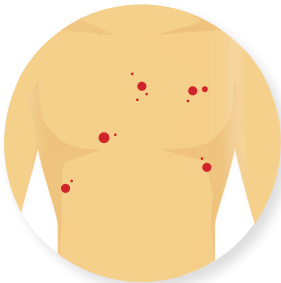
A few ECG monitoring cables or "electrodes" will be attached to your chest. They cause little discomfort and are harmless. To ensure that good tracing is obtained, some body hair may be shaved where the electrodes are placed. The electrodes are connected to a small lightweight recorder (often called a Holter monitor). The recorder is attached to a belt which you wear round your waist. In the case of a 7-Day Holter, an ECG electrode "patch" is used and the recorder will be attached to it.

The fixing of the equipment generally takes less than 20-30 minutes, after which you can leave the hospital. Upon your return, the recorder will be removed and connected to the computer for data transfer and analysis.

# What should I take note of?

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- 1) On the day of your appointment for the fitting of the Ambulatory ECG monitoring test, have a good bath before coming in loose fitting clothing. Ladies are advised to come in a 2-piece attire (top and bottom). Once the appointment is over and the recorder is fitted, you can carry on with your usual activities that you would normally do in a day, except bathing, swimming or engaging in activities that may dampen or soak the equipment. You should also avoid vigorous physical activities that might cause the electrodes to be disconnected, or cause the recorder to be damaged. Your doctor may also ask you to perform activities that have provoked your symptoms before.
- 2) The medical technologist fitting your recorder will provide you with a diary sheet to record your activities and any symptoms you may experience during the test. Accurate interpretation of your ambulatory ECG recording is also dependent on the careful and thorough recording of the results in your diary.
- 3) Do avoid excessive movement of the arms and areas attached with electrodes. You should not engage in vigorous sports that may damage the recorder, or tamper with any part of the instrument assembly, except for loosening the recorder during sleep.



## What are the potential risks/ complications with this test?

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There are no major risks or side effects associated with this test. An ECG recording is painless and harmless. Some people may develop an itch or a rash over the areas where the electrodes are attached. Please inform the medical technologist or doctor should you experience these issues.

## When will I know the results?

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The ECG recordings will require some time to be analysed. Your doctor will inform you of the results usually at your next outpatient clinic visit.



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