

# Exercise Tolerance Test (ETT)

Cardiology Department



Patient information leaflet

An exercise tolerance test (ETT) uses an ECG machine to record the electrical activity of your heart, whilst you exercise. Certain changes in the electrical activity of the heart can indicate an underlying health issue.

The purpose of this leaflet is to explain exercise tolerance tests (ETT's) for people whom have been referred for this type of investigation.

The leaflet will cover:-

- What the test is used to investigate.
- What the test involves.
- Preparation for the test.
- Potential complications and risks.
- Limitations of the test.

## **What is the purpose of an ETT?**

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The primary reason that ETT's are carried out is to investigate for ischaemic heart disease. Ischaemic heart disease is a narrowing of the blood vessels that supply the heart. It is also a common cause of angina (a form of chest, jaw or arm pain) and other heart problems. If positive, the test can also be useful in gauging the severity of ischaemic heart disease.

ETT's are sometimes used to investigate symptoms other than angina. These typically include; palpitations, excessive shortness of breath and light-headedness. Aside from ischaemic heart disease, these symptoms may be caused by arrhythmia (an irregular heartbeat) or abnormal changes in blood pressure.

ETT's can be requested as part of a health assessment. The DVLA often use the ETT to see if people with a cardiac history are well enough to be granted/retain a commercial driving license.

## How is an ETT carried out?

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**Set up:** Small sticky electrodes are attached to your chest and connected to the ECG machine using special electrical leads. You will also be fitted with a blood pressure cuff.

**Pre-test:** Before starting to exercise a resting ECG and blood pressure measurement will be taken.

**Test:** You will be required to start walking on a treadmill at a very slow pace and on a very slight incline (hill). Every three minutes the treadmill will get slightly faster and slightly steeper, the exercise will become more difficult. ECG's and blood pressure measurements are recorded at regular intervals throughout the test.

**End:** There are several end points for ETT's. Most commonly the test ends when enough data has been acquired. The test will also be stopped if it has become unsafe to continue or you cannot carry on exercising due to fatigue, joint pain or other symptoms.

**Recovery:** After exercising you will be asked to take a seat whilst you're ECG and blood pressure continues to be monitored. Once your readings return to resting levels and you feel yourself once more, you will be disconnected and the test is over.

**Total duration:** Depending on your health and fitness levels, the test itself usually takes between 5-20 minutes. The value of the test is much greater if you try to work as hard as you can.

## How do I prepare myself for my ETT?

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It is recommended that you do not have a heavy meal within an hour before the test begins and that you wear loose comfortable clothing. There is a list of medications that should be stopped 24 hours before the test, this will be provided to you with your appointment letter. If your medications are not listed on this letter then you should continue taking them as normal.

## **What are the potential complications and risks?**

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In a vast number of cases an ETT is carried out without issues, in particular if you do not have ischaemic heart disease. Serious complications can occur in a very small percentage of people with ischaemic heart disease. During testing these people can experience a heart attack or a dangerous arrhythmia (serious abnormal heart beat). Medical help is present throughout the testing to deal with such developments.

## **What are the limitations of ETT's?**

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Whilst ETT's are a very useful diagnostic test, they do have limitations. It is possible for an ETT to produce a normal result in people with ischemic heart disease or alternatively the test may indicate ischaemic heart disease in people with perfectly healthy heart.

Doctors are fully aware of these limitations and therefore use the results of your ETT in conjunction with other information such as symptoms, medical history and additional clinical tests.

## **Are there any alternative tests?**

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If it is found on the day that an ETT is not an appropriate test for you, there are alternative testing methods that may be preferential. These include stress echocardiograms and radionuclide imaging techniques.

## **Further reading**

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- **Arrhythmia Alliance**  
Telephone: 01789 450787  
Email: [info@heartrhythmcharity.org.uk](mailto:info@heartrhythmcharity.org.uk)
- **British Heart Foundation**  
Website: [www.bhf.org.uk](http://www.bhf.org.uk)

## Reference source

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**Telephone:** 01789 450787  
**Email:** [info@heartrhythmcharity.org.uk](mailto:info@heartrhythmcharity.org.uk)

## For further information

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- British Heart Foundation/  
**Website:** [www.bhf.org.uk](http://www.bhf.org.uk)





## Contact details

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### Exercise Tolerance Tests

#### Clinical Measurements

Royal Surrey County Hospital NHS Foundation Trust  
Egerton Road  
Surrey  
GU2 7XX

**Telephone:** 01482571122 **ext** 6419

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### PALS and Advocacy contact details

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Contact details of independent advocacy services can be provided by our Patient Advice and Liaison Service (PALS) who are located on the right hand side as you enter the main reception area. PALS are also your first point of contact for health related issues, questions or concerns surrounding RSCH patient services.

**Telephone:** 01483 402757

**Email:** rsc-tr.pals@nhs.net

**Opening hours:** 9.00am–3.00pm, Monday to Friday

If you would like information documents in large print, on tape or in another language or form please contact PALS.

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