

Diagnostic Tests for Syncope

Electrocardiogram (ECG)

Over the years, the ECG has been developed to become one of the most important tests in the investigation of heart-related problems. It can help a doctor understand the possible role of the heart in a person's symptoms or problem.

If you are suspected of suffering with unexplained blackouts or a related condition, then your specialist or doctor may ask for this test. Every patient presenting with blackouts should undergo an ECG.

A resting ECG is an important test as it may help to rule out many underlying heart conditions.

The test is painless and harmless, recording electrical impulses that come from your heart. At no point does this put electricity into your body, or cause any side effects.

An ECG test takes about five minutes. Electrodes (small sticky pads) are attached to your arms, legs and chest and the wires lead to the ECG machine. The machine can then read what is happening to your heart and record the information onto paper.

Through the different electrodes the ECG gives 12 different electrical pictures of the heart. For this reason it is often also called a '12 lead ECG'.

The ECG will tell the specialist whether your heart rate is very fast, very slow or irregular.

It is common to have more than one ECG recorded while being investigated for blackouts. This gives individual clinicians a chance to

review a fresh test to give their own opinion on the heart trace. This also can help if the trace is slowly changing over time.

24 Hour ECG Monitor

If you are experiencing unexplained blackouts, then it may be necessary for you to have a continuous ECG over a longer period of time, often 24 - 72 hours. You would be given a small monitor to wear all the time and this would be able to detect any abnormal heart rhythms that may come and go during that period. Sometimes this may even go on for seven days. If your specialist requires this test you will be given a supply of the electrode stickers so that you can remove the machine to allow you to wash yourself.

It is a good idea during this period to record your activities and any problems that you have. This will enable your doctor to compare your 'diary' with the ECG trace recorded by the monitor. This may identify the reason for your blackouts.

Implantable Loop Recorder (ILR)

If a doctor is unable to diagnose what is causing your symptoms with an ECG and a 24 hour monitor, then they may consider an implantable loop recorder (ILR).

An ILR is used to monitor heart rhythms for months at a time if the episodes are less frequent than every 30 days. The device can remain in place for up to three years.

The ILR can determine whether your fainting is related to a heart rhythm problem. It is a thin device and is inserted just beneath the skin in the chest area. This procedure is

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carried out in outpatients and will take between 15 – 20 minutes.

An ILR can capture your heart's activities during an actual blackout and this will allow the doctor to rule in or rule out an abnormal heart rhythm. Therefore, when you have experienced a blackout or pre blackout symptoms, you will be asked to return to the ECG department of the hospital for the results to be downloaded. You may have received a loop recorder with remote capabilities. This will mean you can send any stored information to your doctor via a phone line from the comfort of your own home without having to go to hospital. In some instances, these results may produce a diagnosis. If so, the ILR may be removed and appropriate treatment given. However, it is not uncommon for the ILR to remain in place for up to 3 years.

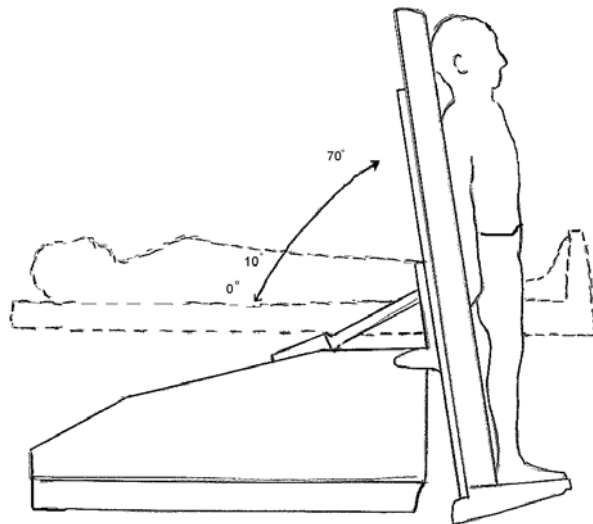
If these results show that your episodes are nothing to do with your heart rhythm then the doctor can consider other reasons for your symptoms.

Tilt Table Test

A tilt table test is a diagnostic test to help establish the cause of fainting and falls which will then help the doctor find the best treatment for you.

The reason for the test is to reproduce your symptoms of nausea, dizziness and even fainting whilst you are monitored closely. During the procedure you will lie on a bed (tilt table). Your feet will be on a footplate and two straps will be placed around you to prevent a fall. The bed will gradually be adjusted to an upright position whilst your blood pressure and ECG measurements are recorded. (see diagram). There will be a doctor or medical professional with you during this procedure.

The test could last up to 45 minutes and you may feel tired and exhausted afterwards – as you perhaps do following a normal syncopal attack.



Approved by: STARS Medical Advisory Committee

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