

## 2 Diagnosing epilepsy

### Is it epilepsy?

- People can have seizures, faints or “funny turns” for many different reasons—epilepsy is just one of them.
- All of the above can be difficult to diagnose.
- It is therefore important to ask your GP to refer you to a doctor who specialises in the diagnosis and treatment of epilepsy.
- The specialist (epileptologist) could be a neurologist, clinical pharmacologist, psychiatrist or general physician.
- It helps if the specialist can speak to someone who has seen what happens. If possible, take an eye witness to your appointment.
- An early and accurate diagnosis is important to:-
  - enable people to come to terms with the diagnosis
  - ensure appropriate treatment and support
  - enable appropriate information to be given on epilepsy, lifestyle and risk reduction
  - promote prospects for best quality of life.
- However, an early diagnosis is not always possible—tests may be inconclusive and time may be needed to record and monitor further events to enable a fuller assessment before confirming a diagnosis.

### The tests

- There is no single test to confirm or rule out a diagnosis of epilepsy. Tests are a tool or a guide to formulating a complete picture. Most of them will take place in a hospital setting.
- In most cases of suspected epilepsy an EEG test is likely to be recommended. Other tests are likely if early tests are inconclusive and seizure activity continues.
- Not everyone will need any or all of the tests described below.
- **EEG (Electroencephalograph)** - traces the brain’s electrical activity and can identify disruptions. EEG is the most frequently used test. It takes up to an hour and is pain free.

- **MRI Scan** (Magnetic Resonance Imaging) - uses magnetic fields and radio waves to penetrate the brain in a non-invasive way to identify very small lesions and scars in the brain. It is very useful in cases where surgery is a possibility.
- **CT Scan** (Computer Assisted Tomography) - X-rays of the brain are taken, providing cross-section images of the brain, which are stored on a computer. Sometimes a dye is injected into a vein to enhance images and highlight suspected areas of brain damage.
- **Ambulatory EEG**—the person wears a tape cassette recorder to provide up to several days' and nights' recording of the brain's electrical activity.
- **Video telemetry**—simultaneous EEG recording of the brain's electrical activity and video recording of seizures.
- **PET Scan** (Positron Emission Tomography) - a non-invasive process that creates 3-dimensional images of the brain. EEG is used during a PET Scan.
- **SPECT Scan** (Single Photo Emission Tomography) - similar process to PET scan, it highlights "hot spots" of seizure activity. No EEG is used.

## Steps to an accurate diagnosis

- Person's own account of what happened.
- Written and verbal eyewitness accounts of what happened before, during and after the episode.
- Initial medical assessment by GP as soon as possible after the episode.
- Investigation by epilepsy specialist (epileptologist).
- Detailed medical history of the person and their family.
- Appropriate diagnostic tests.
- Close monitoring by individual/family/carer following the episode.
- Written record and if possible home video of all subsequent unusual activity, e.g. behaviour, feelings, sensations, movements, faints, funny turns, seizures.
- Understanding that an accurate diagnosis may take time to determine.

This is one of a series of information leaflets available to download from our website for personal use only, subject to the Terms and Conditions for use of our site, which are shown on our Home Page.



Supporting people with epilepsy

## Epilepsy Connections

**Head Office:** 100 Wellington Street  
Glasgow G2 6DH  
Phone: 0141.248.4125 Fax: 0141.248.5887

**Forth Valley Neurology Department**  
**Project:** Falkirk Royal Infirmary  
Falkirk FK1 5QE  
Phone: 01324 624000, Ext 6022

**OR**

Unit 6, The Courtyard  
Callendar Business Park  
Falkirk FK1 1XR  
Phone: 01324.692030

**Email:** [info@epilepsyconnections.org.uk](mailto:info@epilepsyconnections.org.uk)  
**Website:** [www.epilepsyconnections.org.uk](http://www.epilepsyconnections.org.uk)

Epilepsy Connections is a company limited by guarantee and Registered in Scotland No: 212813. Registered Office 109 Douglas Street, Glasgow G2 4HB. Recognised as a Scottish Charity. No: SC030677