If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team:
patient.information@addenbrookes.nhs.uk.
Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.
For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Department of Neurosciences
Clinical Neurophysiology

Patient Information

Electroencephalogram (EEG)
This leaflet is designed to give you some information about the investigation for which you have been referred. We hope it reassures you – we have an experienced team who are expert at these investigations. If you have further questions or concerns you will have the opportunity to discuss these on the day of the appointment prior to the start of the investigation.

**What is the electroencephalogram (EEG)?**

The brain works by electrical signals that can be recorded as waveforms (brainwaves) via electrodes stuck on to the scalp. These brainwaves are sent to a computer and the resulting electroencephalogram (EEG) is read by a doctor. We routinely record digital video simultaneously with the EEG because this allows the doctor to compare any movement with the brainwaves. We will inform you how we will use the information we record. You will have the opportunity to discuss the test on the day of the recording, and before it starts you will be asked to sign a consent form for the video recording.

**Why am I having an EEG?**

There are many reasons for having an EEG. One common reason is to help determine if an attack was a seizure, or to help classify the type of seizure. However, your doctor may have requested the test for lots of other reasons, such as for developmental assessment in children, for an overall view of the function of the brain or as part of a series of investigations.
When do I get the results?
The results will not be available on the day of the recording. A doctor will review the EEG and simultaneous video recording and will prepare a detailed report for the consultant that referred you. It is best to discuss these results with the consultant that referred you since the EEG results will need to be explained alongside any other tests that have been performed.

Contacts / Further information
If you need any further information or have any other queries please contact the neurophysiology administrator on: 01223 217136

What happens before the test?
There are no special preparations required. Please do not use mousse, gel, oil or other hair products as this can affect the recording. Continue taking any medication you are prescribed.

What does the test involve?
A physiologist will use a cotton bud to clean a small area of scalp and then use special paste to stick a silver electrode to the surface of the scalp. This is not painful, but does involve some rubbing. Often they will measure the head and mark the sites where these electrodes are to be put as there are several to attach. The electrodes are attached via thin wires to a ‘headbox’ and from there to a computer, where the physiologist can monitor the recording. A small camera will record simultaneous video.

Usually some special procedures are performed during the EEG which help make it a more accurate and sensitive test. These often include a period of deep breathing and looking at a flashing light. We will ask you a series of questions and inform you about these procedures before they are done. If you are sleepy we will often allow a brief sleep as this can also be helpful.
How long does it take?

In general the recording takes 20-30 minutes and the entire appointment, including set up and taking the leads off, lasts about 1 hour. Many parents worry that their child will not sit still for this length of time, but children can play or have stories read during the recording. A lot of our recordings are performed on children, and we have an expert team who are experienced at distracting or occupying children to enable a good recording. If your child has a favourite toy it would be worth bringing this. A bottle or drink might be helpful for younger children.

Are there any risks?

There are no common side effects. Very rarely either the flashing lights or deep breathing may cause a patient to have one of their characteristic seizures if they are susceptible, but this may help with getting the right diagnosis. Deep breathing provides extra diagnostic information in about 12 per 100 patients. Stimulation with flashing lights provides extra diagnostic information in about 3 per 100 patients. Only about 4 per 10,000 patients would have a tonic-clonic seizure during deep breathing or stimulation with flashing lights. Having a seizure may affect your driving license entitlement so if you are worried then please raise this with the person performing your EEG or the doctor who has sent you for the test.

What happens after the test?

The physiologist will remove the electrodes. This is not painful as the special paste stays soft. They will clean your hair, but it will feel a little sticky until it is washed. Once the electrodes are removed you will be free to return home and you can return to your normal activities.