

What is an EEG?

Information and advice for patients

Neurophysiology

What is an EEG?

An EEG is a recording of the electrical activity of the brain. EEG stands for electroencephalogram. It involves having small discs (electrodes) which record the brain activity attached to your scalp using paste. You may also be asked to breathe deeply or look at bright flashing lights at some point during the recording (these are called activation techniques).

As part of the test you may also be video recorded as this can help to diagnose your condition; you will be asked to sign a consent form to allow this at the beginning of the test.

What is the benefit of an EEG?

The benefit of an EEG is that it will help your doctor to diagnose if there are any problems and he/she will then be able to advise any appropriate treatment if required.

What are the risks of an EEG?

There is a small chance that you may experience some reddening of the skin or soreness where the paste is applied. There is a small risk that some of the activation techniques can provoke some symptoms for which you are having the EEG.

What is the risk of not having the test?

If you choose not to have the EEG, this may delay your doctor finding out what is causing your symptoms and starting treatment.

Are there any alternative tests?

There is usually no alternative to this test that will give your doctor the information they need.

Preparing for the test

- Have something to eat within 1½ hours before your appointment so that your blood sugar level isn't too low
- Arrive with clean, dry hair free from grease, hair spray and lacquers etc.
- Continue to take any medicines as usual and bring a list of these with you to the appointment.
- Bring a comb or brush with you to tidy your hair after the test.

If possible please bring someone with you who have witnessed your events/symptoms.

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If you are unable to keep this appointment please contact us on 0121 507 4319 so that alternative arrangements can be made and the appointment can be given to another patient waiting for the test.

Before the test we will ask you if you have read and understood this information and whether you consent to go ahead with it. We will also answer any questions you have.

During the test

Your appointment will take around 1 hour, but the recording itself only takes about 20 minutes. This is what happens:

1. The person doing the test will start by measuring your head.
2. They will then rub your scalp with some cream and stick some small discs to it using sticky paste.
3. The discs are then connected to the EEG machine by wires.
4. The recording will be taken while you relax, either sitting or lying down. You will be asked to follow commands such as "open/ close your eyes", or perform some of the following 'activation techniques' as they may produce changes in your brain wave activity:
 - **Deep breathing** - You will be asked to breathe deeply for 3 minutes. It can cause a light-headed feeling or tingling of the lips or fingers but this is normal and will pass off afterwards.
 - **Photic Stimulation** - You will be asked to look at a bright flashing light with your eyes open and closed, for a few seconds at a time. This is an important part of the test for people who may have seizures or black-outs caused by flashing lights. We will be looking at the EEG at all times and will stop the light immediately if you appear sensitive. This is done under very controlled conditions.
 - **Sleep** - A recording during sleep can sometimes be helpful so if you are drowsy during the test you may be allowed to drift off to sleep for a few minutes.

What do I feel during the test?

You will feel a cold rubbing sensation on the scalp when the discs are being applied, but there are no sensations during the recording. No needles are involved.

After the test

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After the test the discs will be removed with warm water. Your hair may be sticky and damp and some of the paste may be left in your hair afterwards; this will wash out and you will probably need to wash your hair after the test.

You will be able to return home or to school/work and resume your normal daily activities straight after the test.

When will I get the results?

You won't get the results straight after the test as the EEG has to be analysed. A full report will be sent to the doctor who referred you for the test after about 2 weeks and they will discuss this with you at your next outpatient appointment.

Contact details

You will be able to ask any questions or tell us any concerns before the test is carried out but if you would like to contact us before your appointment please call us on:

Tel: 0121 507 4319

Monday – Friday, 9am – 5pm

Further information

NHS Website

Electroencephalogram (EEG)

<https://www.nhs.uk/conditions/electroencephalogram/>

(Website accessed 03 August 2021)

For more information about our hospital and services please see our website www.swbh.nhs.uk, follow us on Twitter @SWBHnhs and like us on Facebook www.facebook.com/SWBHnhs.

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Sources used for the information in this leaflet

- National Institute for Health and Care Excellence (2021) Epilepsies: diagnosis and management. [CG137]. Available at: <https://www.nice.org.uk/guidance/cg137> (Accessed 03 August 2021).

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