

What is a sleep EEG?

Information and advice for adult patients

Neurophysiology

What is a sleep EEG?

EEG stands for electroencephalogram. A sleep EEG is a recording of the electrical activity of the brain while you are awake and then asleep. It involves having small discs (electrodes) which record the 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). The test usually takes up to 2 hours.

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.

There are different types of sleep EEG recordings:

- **Sleep Deprivation EEG** – For this test you will need to avoid sleeping or have less sleep on the night before the test. The amount of sleep you can have will be detailed in the letter.
- **Natural sleep EEG** – For this test you are allowed to fall asleep naturally and do not need to deprive yourself of sleep before the test.

What are the benefits of a sleep EEG?

The benefit of a sleep 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 a sleep EEG?

There is a minor chance that you may experience some reddening of the skin or soreness where the paste is applied. There is also a small risk that some of the activation techniques or sleep deprivation can provoke your symptoms. In a few cases sleep deprivation can make some people's symptoms more frequent.

What are the risks of not having the test?

If you chose not to have a sleep EEG, this may be a delay in 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 sleep EEG

- Follow the instructions on your appointment letter for the amount of sleep you can have before the test.
- Avoid drinking coffee or other drinks with caffeine in before the test or to keep you awake if you are having a sleep deprivation EEG.

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- Have something to eat within 1½ hours before your appointment so that your blood sugar level isn't too low. You are also more likely to sleep if you feel full.
- 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 you are sleep deprived please bring someone with you to the appointment who can accompany you home as you should not drive yourself home afterwards.

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

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. If you don't feel that your appointment is at a suitable time of day for you to sleep i.e. you feel you are more likely to sleep in the afternoon, please contact us to rearrange.

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 2 hours. 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 over 1-1½ hours while you are lying down, relaxing and trying to sleep. If you fall asleep you will be woken after approximately 30 minutes. You will also 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

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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.

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

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.

If you have been sleep deprived you will probably still feel sleepy after the test and should not drive yourself home. We recommended that you have another sleep when you get home.

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

For more information about our hospitals and services please see our websites

www.swbh.nhs.uk and www.swbhengage.com, 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 of Health and Care Excellence, CG137, 'The Epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care', January 2012
- S J M Smith, 'EEG in the diagnosis, classification, and management of patients with epilepsy', 2005
- Association of Neurophysiological Scientists, "Joint National Audit, Standards for EEG performed when NEAD forms part of the differential diagnosis," February 2017

If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5303 or email: swb-tr.swbh-gm-patient-information@nhs.net



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