

What is an Ambulatory EEG?

Information and advice for patients

Neurophysiology

What is an ambulatory EEG?

An ambulatory EEG is a recording of the electrical activity of the brain over 24 hours or more. EEG stands for electroencephalogram. An ambulatory EEG involves having small discs (electrodes) glued to your scalp, these are attached to a recording box that you carry with you while you go home. A bandage will also be wrapped around your head to secure the wires. As part of the test you will need to keep a diary, and press a button on the recording box when you have any symptoms/events.

The duration of the test will depend on your symptoms and is normally planned to enable some of your events/symptoms to be recorded. You will need to come to the hospital at least twice and maybe up to 3 times; your appointment letter will state how many times you will need to come to the hospital.

Most patients should have already had an EEG before having this test.

You may also be given an option to have a video camera to take home together with the portable EEG machine.

What is the benefit of an ambulatory EEG?

The benefit 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.

Ambulatory EEG is also useful to capture your events, symptoms, or episodes.

What are the risks of an ambulatory EEG?

There is a small chance that you may experience some reddening of the skin, soreness or blisters where the paste is applied.

If care isn't taken with the equipment, there is a small risk that the cable of wires could become wrapped around the throat during sleep. To avoid this the cable should be stuck to the back of your clothing at night to shorten it.

Are there any alternative tests?

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

What are the risks of not having the test?

If you choose not to have an ambulatory EEG, this may delay your doctor finding out what is causing your symptoms and starting treatment, or your condition may be misdiagnosed and not given the appropriate treatment.

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Preparing for the test

- Wear a shirt/blouse that opens at the front to the appointment.
- 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.
- If you are unaware when you have your symptoms you will need to have someone with you, who is able to press the event button and complete the diary.

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. You should also contact us if your symptoms/events have become less frequent.

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. This is what happens:

1. The person doing the test will start by measuring your head.
2. They will then rub your scalp and stick some small discs to it using sticky paste and glue.
3. A breathable bandage will be wrapped around the head to secure the wires.
4. The discs are then connected to a small recording box by wires which are then bundled together. The box is carried in a bag on a belt or over the shoulder.
5. You will then be able to go home with the discs attached and continue to go about your normal activities.

Your diary

You will be given a diary to complete while you have the recorder on; it is vital that this is completed as it is impossible to report on the test without it. You will need to record what you do throughout the test and describe any symptoms that occur. If you do not complete the diary the test may have to be repeated.

There is an event button on the recorder which must be pressed when you have any symptoms/events. If you are unaware when you have your symptoms you will need to have someone with you, who is able to press the event button and complete the diary.

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Changing the battery

You will need to change the batteries in the recorder during the test; we will give you instructions on how to complete this.

Second appointment

When you come back for your second appointment the information will be downloaded from the recording box; this appointment takes up to 1 hour. We will discuss the episodes you had during the test and decide if enough EEG has been recorded. If no events are recorded or they have not been documented in the diary the recorder may need to be set up for another 1-2 days. If events have been recorded and documented, the EEG may be complete at this stage.

When the test is complete the discs will be removed with acetone (nail varnish remover). You will need to remove loose bits of glue with a comb and then clean and condition the remainder out of your hair after your appointment.

If no events or symptoms have been recorded during the planned appointment time it may be possible to extend the test by another 1-2 days.

What do I feel during the test?

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

Is there anything I shouldn't do during the test?

You will not be able to have a bath or shower during the ambulatory EEG, but are able to have a sponge wash. You should also avoid too much vigorous physical activity during the test.

When will I get the results?

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

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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 website www.swbh.nhs.uk, follow us on Twitter @SWBHnhs and like us on Facebook www.facebook.com/SWBHnhs.

Sources used for the information in this leaflet

- Smith, S. J. (2005). EEG in the diagnosis, classification, and management of patients with epilepsy. *Journal of Neurology, Neurosurgery & Psychiatry*, 76(suppl 2), ii2-ii7.
- National Institute for Health and Care Excellence (NICE) (2022). Epilepsies in children, young people and adult's NICE guideline [NG217]. [Online] Available at: <https://www.nice.org.uk/guidance/ng217> (Accessed 24 November 2022).
- Association of Neurophysiological Scientists (2017). *Standards for EEG performed when NEAD forms part of the differential diagnosis*. [Online] Available at: <https://www.ansuk.org/wp-content/uploads/2018/03/NEAD-standards-v1.2.pdf> (Accessed 24 November 2022).

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