

# Recording brain activity after a period of reduced sleep (sleep deprived EEG) (adults & children)

## Clinical Neurophysiology

### Information for Patients

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Your/your child's consultant has asked us to do a sleep deprived EEG (electroencephalogram). This sheet tells you what a sleep deprived EEG is and what you need to know before you come for the appointment.

## What is a sleep deprived EEG?

A sleep deprived EEG is a recording of the electrical activity from the brain after a reduced amount of night-time sleep (sleep deprivation). The way to achieve this will vary according to your age.

A trained professional in healthcare science (physiologist) will carry out the sleep deprived EEG.

## What will I need to do before the sleep deprived EEG?

To achieve sleep deprivation, it is important that you carefully follow the instructions below **on the night before the appointment:**

### Adults (16 years of age and over):

Stay awake for the whole of the night. Do not have any caffeine or similar stimulants.

### Children

Less than 4 years of age: Stay awake until 10:00pm then wake at 6:00am.

Ages 4 to 9 years of age: Stay awake until midnight then wake at 6:00am.

10 years of age and over: Stay awake for the whole of the night.

**Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice**

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There is an greater risk of seizure with sleep deprivation so please make sure you travel to and from the appointment safely. We recommend that you do **not** drive to the appointment if you are sleep deprived, including anyone who may have been awake with the patient during their sleep deprivation.

- Please make sure that the hair is freshly washed. Do not use any styling products
- Please bring a list of current medication and take these as normal
- You/your child may eat and drink as normal
- Please wear comfortable clothing that you/your child are happy to sleep in.

## How long will the sleep deprived EEG last?

Preparation and recording will take up to 2 hours.

## What will happen during the sleep deprived EEG?

- The physiologist may measure the head and make some small marks on the scalp with a wax type crayon.
- They will then prepare the skin at these marks with a gritty gel.
- They will attach the electrodes to the scalp with a sticky paste. The recording electrodes are small metal discs. There will be up to 25 in total. 2 electrodes may also be attached to record the heart rate.
- The physiologist will stay in the room during the sleep deprived EEG.
- They will ask questions about your/your child's medical history.
- During the recording you/your child should relax as much as possible and follow any instructions given, for example, to open and close the eyes. You/your child may be asked to do a deep breathing exercise lasting for a few minutes. Rarely, this may cause a seizure or clinical episode.
- You/your child will be encouraged to sleep for about 1 hour.
- The physiologist may show a series of flashing lights. This is to see if this affects the brain activity. Rarely, the flashing light may cause a seizure or clinical episode in people who are sensitive.
- If a seizure or clinical episode does happen, we will take care of you/your child and make sure that you are safe to leave the department.
- With your consent, we will make a digital video recording. This lets us compare movements and behaviour with the recorded brain activity (EEG).
- At the end of the recording the electrodes will be removed. Any remaining sticky paste will be removed when you next wash the hair. This will not hurt.

The sleep deprived EEG is **not** painful. There are no harmful after-effects.



## When will I get the results?

You will not get the results on the day of the sleep deprived EEG.

Your/your child's consultant will be sent a report which they will then discuss with you.

## Anything else I need to know?

Please let us know if you will be arriving by ambulance, we may need to rearrange the appointment.

## Contact details

If you need any more information before you come for the appointment, please call the Neurophysiology Department on 0116 258 5621

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