

# Electroencephalogram (EEG): information for families

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EEG is a test that looks at the function of the brain. The brain works by a series of nerve impulses which cause electrical signals. These signals (also called brainwaves) can be recorded through the scalp. This information sheet from Great Ormond Street Hospital (GOSH) explains the procedure for an EEG test and what to expect when your child has one. An Easy Read information sheet is included for your child.

A digital video recording will also be made during the test. More information about how we use video recordings is available in the accompanying information sheet.

## How is EEG used?

EEG is a safe method of recording your child's brain function without the need for sedation or an anaesthetic. It can be carried out on patients of all ages and abilities, making it a good way to get an overall view of the function of the brain. It is helpful as part of general investigations and more specific problems, such as blackouts and seizures.

## Getting your appointment letter

If you are unable to keep this appointment, please inform the department as soon as possible beforehand. Sometimes, we can offer the appointment to another child on the waiting list.

As so many children and young people need to use our services, we have had to introduce a policy where if a child cancels or does not attend two appointments in a row, we will inform their GOSH consultant and close their referral.

The person bringing your child to the EEG should have 'Parental Responsibility' for them. Parental Responsibility refers to the individual who has legal rights, responsibilities, duties, power and authority to make decisions for a child. If the person bringing your child does not have Parental Responsibility, we may have to cancel the test.

## Getting ready for the test

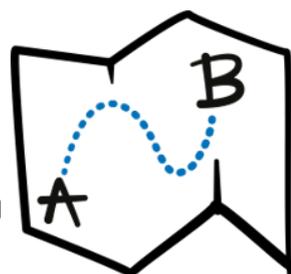
It is helpful if you make sure that your child's hair is clean before the test, with no mousse, gel, oil or hairspray. If your child is taking medicines, you should continue to give them as normal.

If you have other children, it is better if they could be looked after at home or by another adult if they come with you. We are unable to supervise them during the test.

## The day of the test

Your child will have an EEG in the Department of Clinical Neurophysiology which is on Level 4, Southwood Building.

Once you are in the EEG department, check in with reception and soon there will be a Clinical Physiologist (CP) present who will confirm your



and your child's details and take you to the recording room. They will explain in more detail how the test will take place, discussing any worries you may have. They will also ask you to give permission for any stimulus (activation procedures) used, such as flashing lights or over-breathing, and video recording by signing a consent form.

If you require a copy of the signed consent forms, please ask during the appointment.

## Students and trainees

As we are a teaching hospital, on occasion you might be asked if you would agree to a trainee to perform the test under direct or indirect supervision. Sometimes other healthcare professionals or students might ask to observe the test as well. Refusing this will not affect your child's treatment.

## What does the test involve?

The CP will attach a number of small silver discs (electrodes) to certain points on your child's head using a soft paste. Sometimes, they will measure the head beforehand and mark the points with a soft pencil before attaching the electrodes. Extra electrodes will also be applied on the shoulders to record your child's heart rate and muscle activity. Sometimes, additional electrodes may be applied to other areas in order to get more information.

As each electrode is attached, the CP will clean the area of the scalp with a cotton bud and some cream. This does not hurt but some children do not like it. This should take around 20 to 30 minutes. While all the electrodes are being applied, your child can sit on a chair, the bed or your lap, and can play with toys – we have many toys in the department but feel free to bring your child's own favourite book, toy or comforter.

The electrodes are attached by wires to a 'headbox' and then to the recording machine. The CP will record your child's brainwaves on to the computer and monitor them on a screen – they

look like wiggly lines. Your child will not feel anything while the EEG is being recorded. At the same time, the digital video recording of your child will be made – this is helpful for the doctor to observe any symptoms, changes in behaviour or movements that could be associated with seizure activity on the recording.

During the test, the CP may ask your child to lie or sit quietly if possible or continue to play. If your child is old enough, they may also ask them to do some tasks during the test, such as close their eyes for short periods of time, take deep breaths by blowing on a windmill (over-breathing) or look at flashing lights (intermittent photic stimulation). Your child will be continuously monitored throughout the test and these stimulus will be stopped if necessary.

## How long does the test last?

The test takes between 60 and 90 minutes, depending on the information required. There are plenty of toys to play with and another member of staff to help if needed. A bottle or a drink might be helpful for younger children.

## Are there any risks?

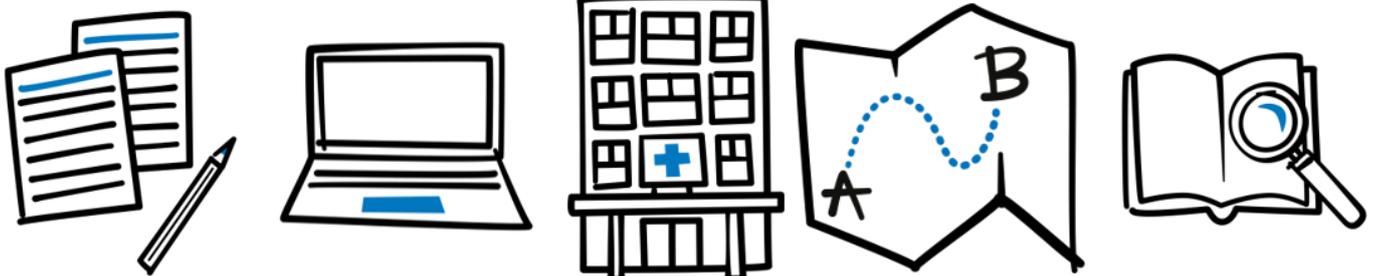
No. The EEG test is painless and there are no after effects. Your child can go back to school or nursery after the test if you wish.

## What happens if my child has a seizure during the test?

If your child has a seizure during the test, their safety will be our first priority and we will take care of them, making sure your child is well enough to leave.

## After the test

The CP will remove the electrodes from your child's head. This will not hurt as the paste stays soft and is easy to remove. They will also clean your child's hair but it may feel a bit sticky to the touch until you wash it. Once all the electrodes



have been removed, you will be free to go if no other tests or appointments have been planned.

## Getting the results

The team will analyse the results and write a detailed report of the test results. We will send this to your child's consultant in time for their next appointment.

## Further information and support

If you require more information about the test or have any questions, please contact the Department of Clinical Neurophysiology on 0207 813 8471, Monday to Friday between 9am and 5pm.

**CBeebies** "Get Well Soon Hospital" series has an episode about having an EEG – Series 2, Episode 5 at [www.bbc.co.uk/iplayer/episode/b09204fx/get-well-soon-hospital-series-2-5-eeq](http://www.bbc.co.uk/iplayer/episode/b09204fx/get-well-soon-hospital-series-2-5-eeq)

## How to find us

Come in through the Main Entrance and walk through Main Reception. At the glass doors, turn right and then first on the left (you are entering *Southwood Building*). Walk through the corridor until you find the stairs and the lifts. Come up to level 4 and walk through the double doors and then down the corridor until you find another double doors. EEG Reception is on your right.

For more information about Traveling to GOSH, please visit our website on [www.gosh.nhs.uk/your-hospital-visit/travelling-gosh](http://www.gosh.nhs.uk/your-hospital-visit/travelling-gosh)

## Having an EEG



You are coming to hospital for an EEG test. An EEG records your brain waves. This helps the doctors work out how to look after you.



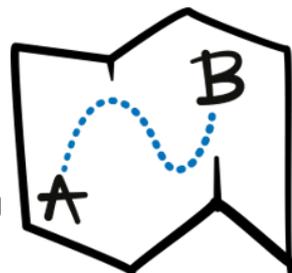
First we will clean small areas of your head with a cotton bud. This will not hurt.



Next we will put some silver discs where we have cleaned on your head. We use sticky paste to hold them in place. This will not hurt.



We will join the stickers to the EEG machine with wires. This will not hurt.





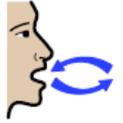
We may ask you to play during the EEG test.



We may ask you to sit still during the EEG test.



We may flash some lights.



We may ask you to breathe in and out quickly.



When the EEG is finished, we will take off the stickers and wipe your head again.



If you are not having any other tests, you can go home.



Please ask us if you have any questions.

