

# Somatosensory Evoked Potentials (SSEP): information for families

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The brain works by a series of nerve impulses, which cause electrical signals within the brain. When a part of the body is stimulated, for instance, the eyes by a flashing light, or the ears by a clicking sound, the brain responds to this stimulation. This response is called an 'evoked potential'. This information sheet from Great Ormond Street Hospital (GOSH) explains the procedure for a Somatosensory Evoked Potentials (SSEP) test and what to expect when your child has one. An Easy Read information is included for your child.

The electrical signals within the brain (also called brainwaves) can be recorded through the scalp. The brain's responses to those are often very small, but can be recorded using special techniques.

The Somatosensory Evoked Potentials (SSEP) test looks at the pathway from the peripheral nerves in the arms and/or legs to the sensory part of the brain, through the spine.

## 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 SSEP 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.

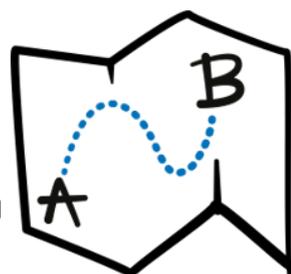
## Getting ready for the test

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.

We might have to access your child's wrists, collarbone, the base of their neck, ankles, the back of the knees and the lower back. To avoid having to take their clothes off at the appointment, it is helpful to wear loose-fitting clothing, preferably trousers and a top (no dresses or jumpsuits).

Skin moisturisers can interfere with the test, so please do not use them on the day of the test.



## The day of the test

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

Once you are in the 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.

## Students and trainees

As we are a teaching hospital, on occasion we might ask you if you would agree for 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 consent will not affect your child's treatment.

## What does the test involve?

The CP will attach small silver discs (electrodes) to certain points on your child's head using a soft paste. Sometimes, they will measure your child's head beforehand and mark the points with a soft pencil before attaching the electrodes. Additional electrodes might be applied to the neck, shoulders, lower back and/or legs.

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. 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.

## Further information and support

If you require more information about the test or have any questions, please contact the Department of Clinical Neurophysiology on 020 7813 8471, Monday to Friday between 9am and 5pm.

Once all electrodes are in place, a small electric pulse will be applied to your child's wrist and/or ankle to stimulate the nerve – this will make their fingers or toes tingle and wiggle but does not hurt. Usually, we repeat each stimulus a number of times so that plenty of responses are recorded and averaged out to show how the nerve pathways are working.

## How long does the test last?

The length of the test depends on how much a child cooperates and how much information is needed. We usually allow up to 90 minutes for the whole test to be completed.

## Are there any risks?

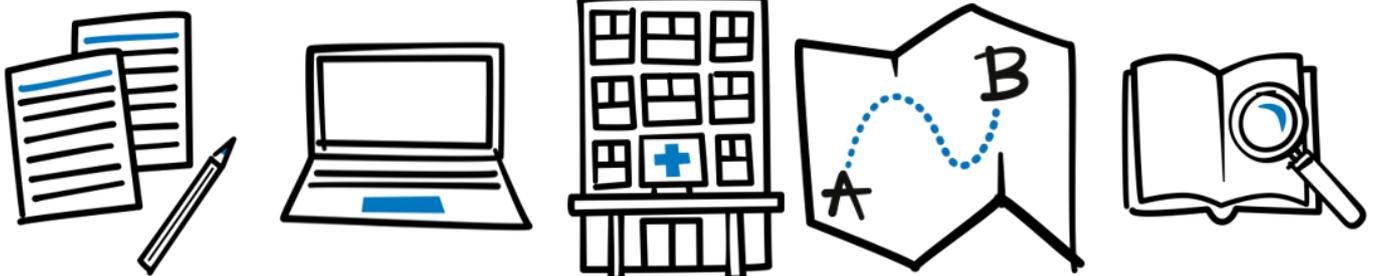
No, the SSEP test is very safe. The procedure may be slightly uncomfortable but is usually painless. Only very rare minor skin irritation from the electrodes have been reported.

## 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.

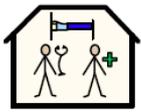


## How to find us

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. Go up to Level 4. 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 SSEP



You are coming to hospital for an Evoked Potential test. This looks at your nerves and brain waves, helping doctors work out how to look after you.



Your brain works using signals. When the brain is made to react to something, the signals change. The EP test records these changes.



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



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



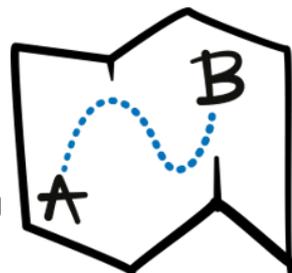
We will join the stickers to the computer with wires. This will not hurt.



We will put another sticker on your hand/foot. This will make your fingers/toes twitch and tingle.



When the EP 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.

