

Your child's sleep-deprived electroencephalogram (EEG)

Information for children, families and carers

We have given you this factsheet because your child has been referred for a sleep-deprived electroencephalogram (EEG). It explains what a sleep-deprived EEG is and what will happen at your child's appointment, so you know what to expect and can help prepare your child. We hope it will help to answer some of the questions you may have. If you have any further questions or concerns, please contact us using the details at the end of this factsheet.

What is a sleep-deprived EEG?

An EEG is a painless test that records brain activity. It involves placing up to 30 electrodes (small sensors) onto your child's scalp to pick up the electrical signals produced by their brain. These signals will then be recorded by a machine.

A sleep-deprived EEG is a specific type of EEG that involves recording your child's brain activity after they have had a period of reduced sleep to possibly reveal more information about their brain function.

The test will take place during an outpatient appointment and it will be performed by healthcare professionals called clinical physiologists in the clinical neurophysiology department.

How should I prepare for my child's test?

The night before your child's appointment, make sure your child is:

- put to bed **two hours later** than normal
- woken up **three hours earlier** than normal (meaning they will have had a total of around 5 hours less sleep than they usually would).

This is to ensure your child falls asleep naturally during the test. They will not be given any sedatives or anaesthetics.

Before their appointment your child should:

- continue to take any regular medication
- eat and drinks as normal, but you should avoid giving them any tea, coffee or other stimulants which contain caffeine
- arrive with hair freshly washed and dried and free from head lice (if required, treat the hair at least 48 hours prior to your appointment). This is to ensure the small electrodes stick to your child's scalp.

Please bring with you:

- a drink
- some food
- a special toy or comforter if this will help your child relax

It is important that you and your child arrive on time for their test. Please be aware that if you arrive late, we may have to rebook your child's test for another day.

What will happen during my child's appointment?

You and your child will be welcomed to the department and the test will be explained.

We will:

- measure your child's head using a tape measure
- use a wax crayon to mark where we need to place the electrodes
- prepare your child's scalp with a special cream
- attach up to 30 electrodes to your child's scalp using a special paste (this paste will wash off with water)
- place an electrode on both of your child's shoulders or arms to record their heart rhythm

Once we have placed all the equipment correctly, we will then start to record your child's brainwaves.

At some point during the test, we will ask your child to watch a flashing light. We may also ask them to blow on a windmill toy to get them to hyperventilate (to breathe fast and deeply). These exercises are 'activation procedures' meaning they can change your child's brainwaves and help give us more information. Before these exercises, we will ask you to sign a consent form on behalf of your child. Signing this form confirms that you understand that there is a very small risk (less than 1%) that these exercises may cause your child to have a seizure. You may decline this part of the test if you wish.

We will record video images at the same time as the EEG activity to help us make a diagnosis.

How long will the test take?

You should allow at least one and a half hours for the test.

What will happen after the test?

After the test, we will gently remove the electrodes and paste using warm water. Please note that your child will need to wash their hair and body at home to fully remove the paste.

When will I receive my child's results?

We will not be able to give you any results on the day. This is because the results need to be analysed by one of our consultants before being sent to the doctor who referred your child for this test. Your child's doctor will then contact you to discuss the results.

Further information

Please note that we see both children and adults in the neurophysiology department and there is a shared waiting room.

Contact us

If you have any further questions or concerns, or if your child's appointment is not convenient, please contact us.

Clinical neurophysiology department

Telephone: **023 8120 6785** (Monday to Friday, 8am to 4pm)

If we're unable to answer your call, please leave a message on the answer machine with your name, hospital number and a brief reason for your call. We will return your call as soon as possible.

Useful links

www.nhs.uk/conditions/electroencephalogram

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For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit **www.uhs.nhs.uk/additionalsupport**

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