

Home Video Telemetry (HVT): information for families

Telemetry 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 a Home Video Telemetry (HVT) test and what to expect when your child has one. An Easy Read information sheet is included for your child.

Home Video Telemetry (HVT) is similar to regular video telemetry, but instead of staying at the hospital, you take the equipment home with you. It is also similar to an electroencephalogram (EEG) test, but it records over a much longer period of time, sometimes taking up to four days to get the information needed.

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 Home Video Telemetry (HVT) used?

HVT 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.

Recording for a longer period of time will allow us to capture your child's brainwaves in different states, such as wakefulness, drowsiness and sleep. Most importantly, we will hopefully capture some events and provide more information about these to your doctor. HVT may be done to obtain

a complete night's sleep recording, to record seizures or tell the difference between seizures and other types of events.

When you receive your appointment letter

If you are unable to keep this appointment, please inform the Ward 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 HVT test 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 come to 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 set-up room. They and one of the doctors will explain in more detail how the test will take place, discussing any worries you may have. They will ask you to give permission for activation procedures (flashing lights and over-breathing). They will also ask you to give permission video recording by signing a consent form.

You will also be asked to sign a form taking responsibility for the equipment at home and bringing it back to GOSH afterwards. If you want a copy of these forms, please ask us. If you are unable to drive to the hospital, transport will be booked to take you home.

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?

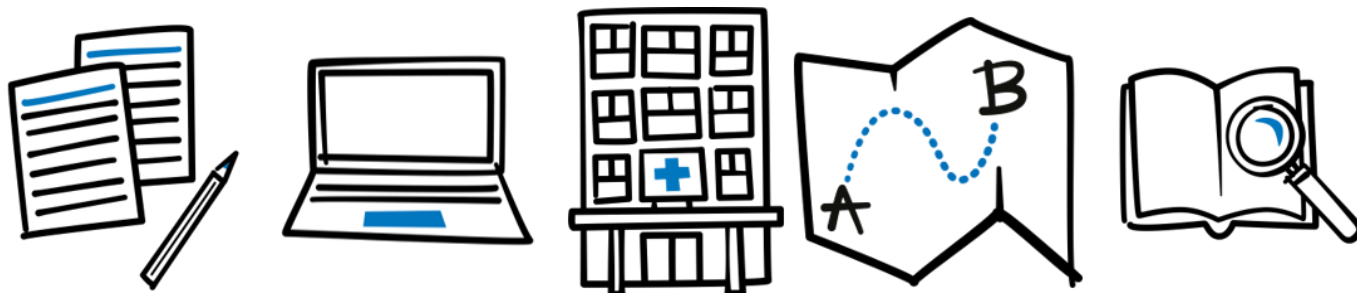
We will need a fair amount of your attention during the HVT connection process. We will give you a detailed explanation at the start of the appointment on how to set up the video camera for day and night recording, you might also be asked to change some batteries if the recording will last more than a day.

The CP will attach a number of small silver discs (electrodes) to certain points on your child's head using a soft paste. 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 30 to 45 minutes. In some cases (such as very active children or those who may try and remove the electrodes), the CP might need to use a special glue – this will not hurt, but it does have a strong smell.

After all the electrodes are applied, the CP will bandage your child's head and use a net to cover the head and the electrodes. They are attached by wires to a 'headbox'. The 'headbox' will be put into a bag, which your child will need to keep close to them. 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 but feel free to bring your child's own favourite book, toy or comforter.

The 'headbox' will record your child's brainwaves wirelessly and this information will have to be uploaded once we have the equipment back. Your child will not feel anything while the HVT 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. Your child can move around the house as long as they stay in range of the camera. Going outside is discouraged, for the equipment's safety.

Your child will be able to eat and drink as normal during the test. No showers or baths are allowed for your child, while the electrodes are in place.

How long does the test last?

Depending on the information needed, the test may continue for four days. In some cases, an overnight stay is long enough to get the results needed.

Are there any risks?

No. The HVT test is painless and there are no after effects. Your child can go back to school or nursery after the electrodes are removed.

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

If your child has a seizure during the test, as they are at home, we ask you to treat them as your normally would. In addition, we will ask you to push an 'Event Button' which marks the recording, and also to describe out loud to the camera what is happening. This will allow us to pinpoint where the event happened and to have a good description from you, in case the video is not ideal.

After the test

In most cases, you will be able to disconnect the wires from the stickers yourself, by cutting through them with a sharp pair of scissors. You can then remove the stickers from your child's scalp and wash their hair as usual. You do not need to keep the stickers or return them to us – you can dispose of them in your usual household rubbish.

We will arrange a courier to collect the headbox and video camera from your home and bring it back to us at GOSH. We will then analyse the recording as usual.

If you cannot disconnect the wires yourself, you can come back to GOSH to have this done.

Getting the results

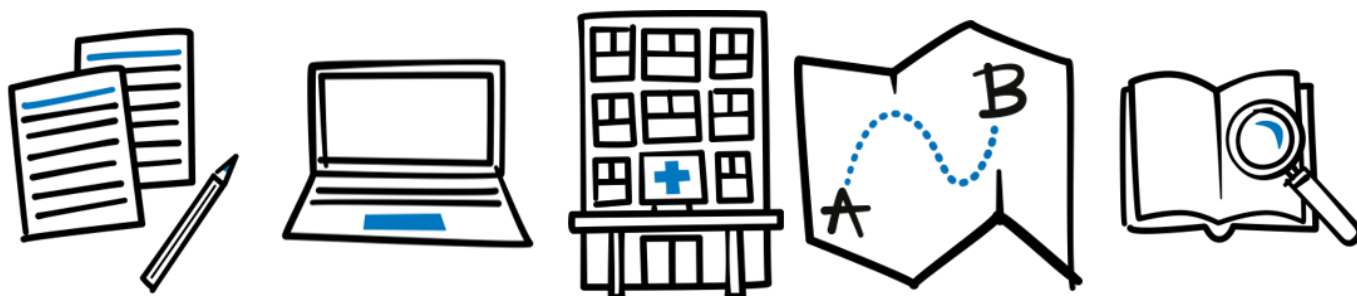
The team will analyse the results and write a detailed report of the test results. We will send this to your child's consultant in time for their next appointment.

Further information and support

If you require more information about the test or have any questions, please contact the Epilepsy Service Coordinator on 020 7405 9200 (extension 5789), Monday to Friday between 9am and 5pm.

Out of hours, you can ring Koala Ward on 020 7829 8827.

CBeebies "Get Well Soon Hospital" series has an episode about having an EEG – Series 2, Episode 5 available online at www.bbc.co.uk/iplayer/episode/b09204fx/get-well-soon-hospital-series-2-5-eeeg

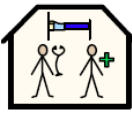










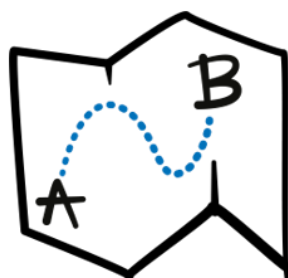
How to find us


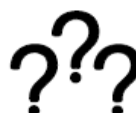
Come in through the Main Entrance and walk through Main Reception. At the glass doors, turn right and then first on the left (you are entering Southwood Building). Walk through the corridor until you find the stairs and the lifts. Go up to Level 4. Walk through the double doors and then down the corridor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

Having HVT

	You are coming to hospital for HVT. This is the same as an EEG but you will be recorded for a few days. An EEG records your brain waves.
	We will measure your head and will clean small areas with a cotton bud. This will not hurt.
	We will put some silver discs with stickers and paste where we have cleaned on your head. This will not hurt.
	We will join the stickers to the EEG machine with wires and bandage your head, making a nice hat. This will not hurt.
	We will also make a video of you. This will show us if you move around in the room or bed.
	You will be going home with the electrodes attached and a small bag.
	When it is bedtime you will go to sleep as usual. You will still be having the EEG test.
	You can eat, drink and play as usual at home.
	At the end of the test, your parents can cut the wires and take the stickers off of your head. This will not hurt.



	<p>We will arrange someone to collect the headbox and camera and bring it back to GOSH.</p>
	<p>Please ask us if you have any questions.</p>

