

# Paediatric EEG Service

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**This leaflet is for the parents/carers of children who have been referred for an EEG test with melatonin at the John Radcliffe Hospital by the Royal Berkshire NHS Foundation Trust's Paediatric Epilepsy Team.**

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## What is an EEG test?

An EEG (electroencephalogram) is a test to record the electrical activity of your child's brain. The nerve cells in the brain produce tiny electrical signals. Recording and checking these can give doctors useful information about how your child's brain is working. EEGs can be used to diagnose and monitor seizure disorders, sleep disorders and movement disorders.

Our paediatric EEG service works out of the Neurophysiology Department at The John Radcliffe Hospital in Oxford. Once a referral for the EEG has been sent, you will be contacted by the team in Oxford with a date and time for the appointment.

The Neurophysiology Department is based on Level 3 of the West Wing, John Radcliffe Hospital, Oxford OX3 9DU. Visit <https://www.ouh.nhs.uk/hospitals/jr/find-us/> for travel directions.

## What is melatonin?

Melatonin is a natural substance (hormone and nutrient) produced by the body. It is usually dispensed in liquid form and given orally for the purpose of an EEG. It is short-acting and encourages relaxation and natural sleep. It is not a strong sleeping medicine and your child may not sleep.

The use of melatonin for children is unlicensed by drug manufacturers but still recommended by the NHS for use in EEGs. There are times when doctors advise patients to use a medicine in a way not specified by the manufacturer. They do this because it may help to treat a particular condition.

## What are the benefits of an EEG with melatonin?

An EEG can help doctors to diagnose epilepsy or to find out more about the nature of your child's episodes or seizures. Recording the EEG during drowsiness and sleep can also help with diagnosis.

## Are there any risks associated with EEG or melatonin?

There are no known risks or side-effects of having an EEG. Melatonin is generally considered to be safe and nothing other than sedation (feeling sleepy) has been reported in adults or children.

## What happens during the EEG?

The EEG takes about one hour. A clinical physiologist (specialist in electrical function of the brain) will prepare your child for the test. They will mark measurements on your child's head with a soft crayon. After gently rubbing a gel over the marks, the physiologist will attach 22 electrodes (small discs) using a special adhesive.

Compassionate

Aspirational

Resourceful

Excellent

During this preparation, your child can sit on your lap, looking at books, a tablet/phone or playing with toys. You may want to bring your child's favourite book, electronic game, toy or comforter with you. Your child will be made comfortable on the bed and covered with a blanket. You will be able to sit beside them and read a story if you so wish. They will be encouraged to close their eyes to enable sleep. The discs are connected to the EEG computer. They pick up electrical signals from your child's brain and these are recorded as wavy lines.

During the test your child may:

- Be asked to take deep breaths and blow a windmill. This may produce changes in the electrical activity of your child's brain that could help in diagnosis.
- Have a light flashed in front of them, with their eyes open and shut. This is called photic stimulation. It is an important part of the test for children who may have seizures or blackouts caused by flashing lights. This, very rarely, may cause a seizure if your child is one of the few people that are very sensitive to flashing lights. If this appears to be the case, the light will be stopped.

You will be asked to give your consent for the clinician to make a video recording of your child while the EEG is taken. This helps us when we interpret the EEG and to make a diagnosis. We can observe any changes, for example in your child's breathing or movements, which may be associated with seizure activity on the recording.

The link below may be helpful to prepare your child for an EEG: [How do I prepare my child for an EEG? – Bing video](#)

### **Will my child feel any pain or discomfort during the test?**

Your child will feel their skin being rubbed and the discs being pressed onto their head, but the test should be painless.

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

It is unlikely that the test will make them have a seizure. If a seizure happens, the clinical team will provide the relevant care until your child is well enough to leave.

### **What happens after the test?**

The discs are removed and your child will be able to go home or to school. The sleep-inducing effects of melatonin do not last very long. Small pieces of sticky paste may be left in your child's hair – these will wash out with shampoo.

### **When will we get the results?**

The results of the test need to be analysed, and a full report will be sent to the doctor who asked for the test within two weeks. Your doctor or nurse specialist will then be in touch with you with the results. This will either be by phone call, letter or at an arranged clinic appointment.

## Is there anything you need to do to prepare?

- You will need to collect the melatonin from Lloyds Pharmacy in the Concourse at the Royal Berkshire Hospital before your child's EEG appointment and take it with you on the day. The doctor who requested the EEG will get notified of the appointment date and will prescribe the melatonin.
- The melatonin is usually ready to collect 1-2 weeks before the date of the EEG.  
**To check the melatonin is ready to collect, please call Lloyds Pharmacy on: 0118 322 7798. Opening hours Monday-Friday 8.30am – 6pm.**
- You should continue to give your child any medicines they take regularly.
- Please wash your child's hair the night before or on the day of the test and do not use any hair products such as gels, oil, wax or sprays, as they will prevent the electrodes from sticking to your child's head.
- It is important for the child who is having the test, to be quiet and relaxed. If possible try to avoid them falling asleep on the way to hospital.
- If you have other children, it is best if they can be looked after at home, or by another adult if they come with you.

## Further information

Contact the Paediatric Epilepsy Nurses on:

Cath Hagan: 07385 384089 Email: [catherine.hagan@royalberkshire.nhs.uk](mailto:catherine.hagan@royalberkshire.nhs.uk)

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To find out more about our Trust visit [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

**Please ask if you need this information in another language or format.**

RBFT Paediatric Epilepsy Service, August 2022.

Next review due: August 2024