

# Electroencephalography (EEG)

## Information for Parents and/or caregivers

Welcome to the Southern Adelaide Local Health Network.

This information sheet aims to answer any questions you may have about your child having an EEG.

### What is an EEG (electro-encephalogram)?

An EEG is a safe and pain-free test that records the electrical activity of the brain. The information is recorded on a computer and interpreted by a Neurologist (a doctor specialising in disorders of the brain)

### Why is it necessary?

The EEG recording shows the rhythmical electrical activity, sometimes called “brain waves”. The overall pattern and distribution of these waves can provide important information to help the doctor with his/her diagnosis for your child.

### Will it hurt?

- An EEG does not hurt.
- During set-up, your child will feel their hair and scalp being touched, and a slight scratching on the scalp as it is cleaned.
- During the EEG, the child does not feel anything during the recording. There are no after effects from the EEG.

### How is it done?

The scientist will introduce themselves and explain the procedure. Your child's head will then be measured, and mark the scalp where the electrodes will be placed.

The scientist will clean these areas lightly, which may feel like a light scratching. The electrodes will be placed on the scalp and kept in place with a sticky paste and some light tape. Alternatively, an elastic cap with pre-measured holes may be placed over the head to help with electrode placement.

### How long does an EEG take?

Please allow approximately one hour for the EEG to be conducted. This includes set-up and the recording. The recording usually lasts 20-25 minutes.

**Please note – it is not appropriate for other young children to be present during testing.**

### Before the EEG

Where appropriate please go through this information with your child.

- To assist in the set up shampoo your child's hair before coming in for the EEG. Do not use conditioner, gel or mousse on your child's hair.

**Note: If your child has had a recent infection of head lice, please phone us as the EEG may not be able to be conducted.**

- Do not stop medications unless requested by the doctor.
- Fasting is not required.
- Eating and drinking during the test is generally not appropriate.
- For younger babies it may be advisable to bring a bottle or be prepared to feed them to settle them.

### What occurs during the EEG?

- Before testing, the EEG scientist will ask a few questions about your child even though you may have given this information to your doctor.
- After explaining the procedure, the scientist will measure your child's head and mark the scalp with a soft pencil where electrodes will be placed.
- The more relaxed and still your child can be, the better the recording. Babies and young children may need dummies. There is a TV/DVD player, books and toys to assist in keeping your child settled. You may wish to bring a small favourite toy from home.
- Your child will either sit in a reclining chair, or may be sat/held in your lap. The electrodes will be placed on their heads, as described.
- Depending on the age they will be asked to open and close their eyes at times.
- An important exercise during the recording is blowing for several minutes – usually on a windmill. This can produce sub-clinical activity that may not otherwise appear. The age of the child will determine the suitability of this procedure.
- Photoc stimulation (looking at a strobe light) is also routinely used. This is a safe procedure which may result in sub-clinical seizures (seizures that do not present any clinical signs or symptoms) which can assist the neurologists in deciding the appropriate anti-convulsant medication to prescribe.

- A video is recorded in case an event occurs. This gives the Neurologist an accurate visual record in conjunction with the EEG recording which can assist in diagnosis.
- If no typical events are recorded, the video is deleted.

## Special tests

Occasionally, a special test may be requested, e.g. an EEG while your child sleeps, or to monitor for longer than the usual recording time.

Other information is provided when these EEGs are requested.

## Results

The EEG technician cannot give you the results of the test. The test will be reported by a neurologist and sent to your referring doctor, usually only one to two weeks later.

## Where is the EEG conducted?

The EEG takes place in the Department of Neurology, Level 2.

## Care at home

An EEG is a safe procedure; generally there are no special instructions for after care. However, you will need to wash your child's hair thoroughly to remove all traces of gel.

## Key points to remember

- An EEG is completely safe and pain free
- Your child needs to have clean, dry hair with no hair products.
- Arrange for someone to mind other children, as they cannot be present for the EEG.
- Your child needs to remain reasonably still during the test

Adapted from:

- EEG parent health information, RCH : Melbourne 2018
- Routine EEG : health information, RCH : Melbourne 2018
- EEG explained: Epilepsy Action Australia:2018
- Uptodate: EEG the basics:2018

## For more information

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