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## ***EEG (Electroencephalography) Information Sheet***

### **Electroencephalography (EEG)**

- An electroencephalogram (EEG) records the electrical activity of the brain and is interpreted by a neurologist. It is a safe and pain-free test.
- EEG is performed to diagnose seizures, epilepsy, and seizure like events such as syncope/ movement disorder/ sleep jerks.

### **How is EEG test performed?**

- Your child's hair needs to be clean, dry and have no extra products such as oil, mousse or gel applied. If your child has head lice, please rebook the appointment, once this has been treated.
- Before testing, the EEG scientist will ask you a few details about your child and nature of events.
- Your child will either sit in a chair or be held by you.
- After explaining the procedure, the scientist will measure your child's head and mark the scalp with a soft pencil. These markings indicate where electrodes will be placed.
- The scientist will clean these areas with a cotton bud using an exfoliating gel.
- The electrodes (23 small metal discs) will be applied using a sticky conductive paste and some tape. A bandage may also be applied to keep the electrodes in place during the recording.
- Your child needs to remain only reasonably still during the recording.
- The EEG scientist will be monitoring the recording and annotates any events or movements.
- Video is also recorded to capture any typical events during the recording. This helps the neurologist with interpreting the event in correlation with EEG tracing.
- During the recording a few activation techniques are used and is dependent on the child's age and ability:
  - Eyes opening and closure
  - Deep breathing (hyperventilation)
  - Flashing strobe light (Photic stimulation)
  - Sleep EEG is recorded where possible. Sometimes your doctor may ask for sleep deprived EEG (see below) to facilitate sleep EEG record.
- For younger children, it's better to postpone usual afternoon/day time nap to coincide with the EEG.
- Ideally, we need your child to be fairly still during the recording which may be difficult particularly in infants. The EEG scientist is experienced in helping infants/children to relax, and distractions such as toys and kids shows on mobile devices is permitted. Please bring these with you to the appointment.

**What is sleep deprived EEG?**

A sleep-deprived EEG test is sometimes performed as it increases the chance of finding epileptic abnormalities. Before a sleep-deprived EEG test, school aged children (>5 years) will be asked to stay up as late as possible (3 hours past the normal bedtime) and to wake up at least 2 hours earlier than normal. Care should be taken and discussion with your doctor should occur if sleep deprivation is a trigger for your child's seizure. In that case, it may be possible just to wake your child up earlier than usual on the day of the EEG test.

**Can I stay with my child?**

Yes. You are welcome to stay in the recording room during the EEG unless you feel that your child will be more comfortable without you. It is important to arrange for another adult to look after any other children while the recording is being done, as they cannot stay in the room.

**Common concerns**

During setup, your child will not feel anything other than their scalp and hair being touched. The paste is easy to wash out of the hair after the test is completed. There are no side effects from an EEG. An EEG is not harmful, there are no X-rays or injections and it cannot read your thoughts. All EEG recordings and relevant portions of video are saved and kept in a secure place in Westmead Specialists /Randwick Specialists.

**How long will it take?**

The test usually takes about 45 minutes but sometimes it may take longer, especially if a sleep recording is needed. The request for sleep EEG recording will require total of 80 minute recording.

**When will I receive the results?**

Neurologist will discuss the results with you and the report will be sent to your doctor within 24-48 hours.

**Things to remember**

- Wash your child's hair the night before.
- Bring your Medicare card and the EEG request card or referral letter (if it has not already been sent in).
- If sleep recording is required, follow the instructions provided under sleep deprived EEG (see above)