

Electroencephalogram (EEG)

An EEG is a recording of the electrical activity of the brain which is sometimes referred to as your “brain waves”.

We record squiggly lines representing brain waves in a special computer, called an electroencephalograph, and digital video of your activities during the test.

EEG's are done for many different reasons:

- Seizures
- Blackouts
- Tumours
- Strokes
- Developmental delay
- Unexplained coma
- Mental disturbances

Prior to your test:

Routine EEG's do not require a lot of preparation by the patient. Hair should be clean and product-free. Unless instructed by your physician, always take your regular medications. For routine EEG's, there is no reason to miss any meals.

Sometimes you need to sleep during your test; this is called a **sleep EEG**. Sleep is encouraged by way of sleep deprivation the night before the test, rather than sedation, as often as possible. This is very important because sleep can be a very good activator of abnormal activity in certain medical conditions. **It is also imperative that young children (less than 5 years) are sleep deprived** to ensure adequate cooperation and the best possible quality recording.

Our sleep deprivation guidelines are as follows:

- Adults: As little as possible, sleeping only between 2:00 am and 5:00 am if they must sleep.
- Children under 1 year: The child should be awake for 3 hours prior to their test.
- Children age 1-3: The child should be kept up late and then awoken again at least 3 hours prior to their test.
- Children older than 3 years: Their sleep should be cut in half ensuring they are up 3 hours prior to the appointment time.
(Example: If the child normally sleeps from 7:00 pm to 7:00 am, they should sleep from 11:00 pm to 5:00 am for an 8:00 am appointment)

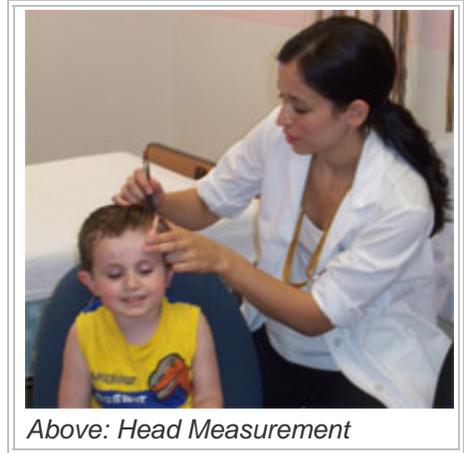
Also important to remember:

- Patients must come awake to their appointment.
- No caffeine prior to their appointment.
- No naps en route to their appointment.
- Bring comfort items for sleeping if required (blanket, stuffed animal, pacifier, music, etc)
- A child should not be bottle or breast fed just prior to their appointment, we encourage this to be done after we have set the child up for their test, otherwise they will not settle.
- Have someone drive you here and pick you up if you are having a sleep EEG.

If sedation is required, it will be arranged either ahead of time with your physician or in the lab by a registered technologist.

During the test:

- The technologist will ask you many questions about why you are here.
- We will measure and mark your head with a washable grease pencil.
- We will clean each spot with a special abrasive cleaner to ensure a good contact.
- Surface electrodes are placed on each spot, held on with a special conductive paste.
- Now that you are prepped, you will be asked to lay quiet and still on a bed, while we are making a recording of your brainwaves.
- Most of the recording is with your eyes closed.
- You may be asked to do some deep breathing.
- Most patients are shown a bright, flashing light for a few minutes.
- If you are sleepy, feel free to fall asleep!



Left to right: Skin prep; Applying electrodes with conductive paste; Flashing Light

How long does it take?

Set up and recording of a:

- routine EEG usually takes one hour
- sleep EEG usually takes 1.5 hours
- prolonged EEG usually takes 2.5 hours

After the test:

- The electrodes are removed and the paste is cleaned off with warm water and you are free to go home
- Kids get to pick out a prize!
- The technologist prepares your recording for the interpreting neurologist
- A report is typed up and distributed to the appropriate physicians