

Electroencephalogram (EEG)

What is an electroencephalogram (EEG)?

An EEG is a safe, painless test used to monitor and record electrical activity in the brain. Every child's brain produces electrical signals that can be measured. The electrical signals form a pattern that can be interpreted by a doctor with special training. Abnormal brain wave patterns on EEG can be a sign that a child is at risk for seizures or other neurological problems. Most commonly, EEG is used to diagnose and treat seizures.

What happens during the test?

An EEG is performed either in the Neurology Clinic or in the hospital. A trained EEG technician will attach small metal discs (also called electrodes) to your child's scalp using a paste. These disks are attached to wires, which send signals to a computer that records the results. Your child will be asked to lie quietly in a bed during the test. The EEG technician may ask your child to breathe a certain way, or look at a blinking light. Most EEGs last under 1 hour, although in some cases, more prolonged monitoring is recommended. Often, the technician will try to capture brain waves while your child is both awake and asleep. After the recording is completed, the EEG technician will remove the electrodes and the test will be complete. Some children experience mild discomfort and may dislike lying still when the electrodes are placed or removed, but in general, EEG is a safe, noninvasive, and painless test.

How will I find out the results of the test?

After the EEG is performed, the computer data will be sent to a specially trained doctor (usually a **neurologist** or **epileptologist**) for interpretation. The EEG technician is not able to give you results of the test. The doctor will "read" the EEG, or interpret the brain wave patterns, and create a report of their findings. Then, your child's neurology provider will discuss the results with you during an office visit, hospital consultation, or phone call, depending on the circumstances. In some cases, results will be available quickly. Other times, it may take a few days for the doctor to read the EEG and create a report. If you have any questions about your child's EEG results, please do not hesitate to contact our office.

How do the results of the EEG affect my child?

The results of EEG testing affect each child differently, depending on their medical condition and the reason the test was ordered. Your child's neurology provider will discuss how the EEG results will affect your child's medical care. Depending on the results, a longer EEG or a video EEG may be needed to best clarify the results.

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DCMG Neurology EEG Lab

Child's Name: _____

Date of EEG: _____ Time of EEG: _____

If you are running **more than 15 minutes late**, please call our appointment line at 512-628-1855. **It may be necessary to reschedule** for a later time or date.

General instructions:

- **Make sure your child has CLEAN, DRY HAIR.** Please, no styling products, grease/oils, or leave-in conditioners.
- Bring a list of medications your child has taken in the last 48 hours.
- Do not discontinue any medications unless directed by your child's neurology provider.
- **Make sure your child has no caffeine or sugar before the test, if possible.**
- Please bring anything that might help your child relax or feel comfortable (such as a book, blanket, or stuffed animal).
- Please turn **cell phones on silent before entering the EEG lab.**
- Please bring something to keep your child entertained, as they must lie still for 1-2 hours during the test.

Sleep deprivation instructions (in addition to general instructions):

- Ages 3 and younger: No nap on the day of testing. Your child may nurse or have a bottle during the test.
- Ages 4 and older: No more than 4-6 hours of sleep before the test.
- **Achieving sleep is very important for this test.** We ask that only one family member at a time be in the sleep lab with the patient.

24-hour or ambulatory EEGs (in addition to general instructions):

- Make sure your child wears a button-down shirt, or they will not be able to change clothes after being hooked up to the EEG computer.
- Remember to **KEEP YOUR CHILD'S HAIR CLEAN AND DRY**. Please, no styling products.
- If the EEG will be monitored at home, you will need to bring your child back the next day to be disconnected.

Resources and References:

<https://www.partnersincare.health/ut-health-austin-pediatric-neurosciences-at-dell-childrens/comprehensive-pediatric-epilepsy-center>
<https://www.kidshealth.org/en/parents/eeg.html>