Ambulatory EEG Monitoring

What to Expect from EEG Monitoring at Home

What is ambulatory EEG monitoring?
Ambulatory EEG (electroencephalogram) monitoring is a test that measures and records electrical activity in the brain for up to 48 hours using a special recording unit while your child is at home or school. This special recording unit is slightly larger than a smart phone and allows your child to go about their normal routine while the EEG is being recorded.

Why is an ambulatory EEG needed?
An ambulatory EEG helps the doctors determine if your child is having abnormal activity in the brain at different times of the day and night. This includes while your child is doing normal daily activities such as eating, playing and sleeping. This is important because electrical activity in the brain can be different when a person does different activities.

How is the test done?
- A specially trained EEG technologist will apply the electrodes and the EEG equipment that is required, which will take about 90 minutes from start to finish.
- Your child will be asked to lie down on a stretcher or bed.
- Your child’s head will be measured with a measuring tape. The technologist will mark 30 locations on your child’s head with a washable, red pencil.
- Your child’s hair does not need to be cut or shaved. The EEG technologist will rub a sandy cleanser on the places where the electrodes will attach before putting them on.
- Small circular shaped electrodes will be placed on your child’s scalp using removable glue. This will take about 20 minutes.
- Your child’s head and body need to be completely still when the electrodes are placed. You may be asked to hold your child’s cheeks to keep their head still. If your child moves too much, their arms may be wrapped snugly so that it can go as quickly and easily as possible.
- The electrodes are connected to a small EEG computer machine that is carried in a small backpack.
- Your child’s head will be wrapped in gauze and a soft stocking cap to protect the electrode wires.

An ambulatory EEG is a painless test of your child’s electrical brain activity for 24 to 48 hours while your child is going about their normal daily activities at home or school.
How do I prepare my child?

Before the appointment, please:

- Have your child’s hair clean and dry. Please avoid styling products, oils and braids. These make it difficult for electrodes to stick in place. Using these products before the test may mean that we have to delay or reschedule the test.
- Give medicines as scheduled, unless your child’s healthcare team gives you different directions.
- Your child does not need to change sleep patterns.
- Dress your child in clothing that buttons or zips down the front. Please do not have your child wear clothes that need to be pulled over their head. This is to prevent the EEG electrodes from being pulled off.
- Plan to be with your child, or make arrangements for an adult family member to be with them at all times while the EEG is on. This is important because you will be asked to record all episodes your child has on the Event Log.
- If your child is going to attend school, discuss the plan with the school teacher and/or nurse.

What will happen the day of the ambulatory EEG hook up?

- On the day of your child’s test, you will check in at the registration desk.
- After the electrodes are put on your child, the EEG technologist will review home care instructions and the date and time for the return appointment to have the equipment removed.
- You will be given instructions about how to keep the electrodes intact.
- You will be given instructions about how to push the event marker.
- You will be given instructions about how to complete the Event Log and the Episode Description Sheet. They will help the technologist and doctor who read and interpret the computer data to make an accurate report.

What do I need to do when we are at home?

Make sure that the electrodes and equipment stay intact. To keep the electrodes intact:

- Do not allow any of the equipment to get wet, bent, pulled or unplugged.
- Do not allow your child to shower, take a bath, swim or participate in any type of sports.
- Do not allow your child to chew gum as this may cause “artifact” on the recording.
- Do not allow your child to remove the stocking cap.
- As much as possible, try to limit or prevent your child from scratching their head.
If your child has an aura or is experiencing the episode in question:
• Do push the event marker.
• Do write the date, time and a description of the episode the log sheet.
• Do write additional times on the log sheet such as when your child is going to sleep, waking up, eating, playing etc.

What do I do if an electrode falls off during the study?
• If an electrode falls off, write on the log sheet when it occurred and let the technologist know upon your return to the lab. This is not considered an emergency.

Who do I call if I have questions while my child is having the test?
• If it is an emergency, call 911.
• For non-emergent issues or concerns about your child’s medical condition, call the doctor who ordered your child’s EEG test.
• For questions about the equipment, what to do while you are at home, or other concerns about the test, call the EEG department during business hours, Monday-Friday 7:30 a.m. to 4 p.m. at 206-987-2081. If problems arise outside of business hours, call EEG Testing when regular business hours resume.

What happens when the test is over?
• On the day your child’s test is over, you will return to EEG lab to have the electrodes and the computer removed.
• The technologist will remove the electrodes with a glue remover. They will instruct you how to remove any residual glue that may have been left behind.
• You will be asked to give the technologist the completed written Event Log and the Episode Description Sheet.
• After the test, your child will need a bath or shower as soon as they get home. Make sure that your child does not touch their hair until it is washed because the glue remover will sting if it gets in their eyes.
When can we expect results of the EEG?

- You will not be able to get results on the day of the test. The EEG technologist cannot give you any specific information about the test results.
- The EEG is read by a clinical neurophysiologist who reviews the EEG recordings and the descriptions of the events that you wrote in the Event Log and the Episode Description Sheet.
- The clinical neurophysiologist will give significant findings from a first review of the study directly to your child’s neurology provider prior to a final report. About 2 weeks after the test, a final written report will be sent to your child’s neurology provider.
- When the results are ready, your child’s neurology provider who ordered the test will explain them to you. Please call your child’s neurology provider 10 to 14 days after the EEG test for results. You may be asked to make an additional appointment to see a neurologist in the Neurology Clinic following the results of your child’s EEG test.