

Evaluation for Epilepsy Surgery: What to expect in the Epilepsy Monitoring Unit (EMU).

Introduction

Epileptic seizures happen when cells in the brain become overstimulated because of abnormal electrical impulses. Seizures look different for each child and respond to different types of treatment. For some children with epilepsy, medicine alone is not enough. Sometimes surgery may be recommended as a part of the treatment.

If surgery might be an option for your child, they will need to spend time in the hospital for monitoring before surgery. During your child's stay in the Epilepsy Monitoring Unit (EMU), they will have tests to find out what type of seizures they are having and where in the brain they start. This information will help their care team decide the best way to treat the seizures.

The decisions involved in epilepsy surgery are not easy ones for you to make, but our team will be there to support you along the way.

Planning your child's stay in the EMU

If surgery might be an option for your child, they will stay in the EMU to have **Video-EEG monitoring**. This test combines video monitoring and EEG (Electroencephalogram) monitoring. EEG is a test that detect abnormalities in the brain waves or the electrical activity in the brain.

- This test takes 4-6 days but may be longer. It needs to be long enough to record more than one typical seizure.
- Patients are usually admitted on a Monday.
- Each day the EMU team will meet with you and your child to create an action plan for the following day.

Your child will be on constant video monitoring during their stay. Because caregivers know their child best, we need a parent, guardian, family member, or friend to stay with them **at all times**. This person should know your child well, be aware of their condition, and must be over 18 years of age. Other visitors can visit per hospital guidelines.

Preparing for your child's admission to the EMU

Your child's hair has to be in the natural state. Any braids, accessories, or extensions must be removed. Then wash your child's hair the night before you come to the hospital. After washing, do not add any styling products. These items all affect our ability to get a good test. **If your child is sick, has a fever higher than 100.4, or has lice or nits, you must reschedule your appointment. Please call 214-456-2740 to reschedule.**

Please give your child any medicines they normally take before coming to the hospital unless their doctor has told you not to. **Please know what your child's current medicines are and**

bring them in the original prescription bottle with you so we can double-check them. Not all medicines are available in the hospital. If your child's medicine is not available, we can use the medicine from home during your child's stay.

Your child's meals will be provided during their stay. Parent or caregiver meals will need to be purchased. You can also bring your own food from home and store it in the refrigerator on the unit or bring a personal ice chest/cooler.

Your child should bring changes of clothing such as pajamas that either zip or button, and things like soap, toothbrush, toothpaste, or deodorant. Toys, homework, blankets, and games can make a child feel more at home. You may bring these items with you. We will provide blankets, sheets, pillows, and towels for you and your child.

If you need any help from Social Work, please call the main office at 214-456-2300.

Admission to the EMU

Check-in at admitting 30 minutes before your child's appointment - 1st floor

Address: 1935 Medical District Drive, Dallas, Texas, 75235

Parking Information:

Paid parking is available at the garage.

Lost Ticket Charge: \$10.00

Valet Parking: \$10/day

Time in Garage	Amount
0-59 Min	Free
1 Hr - 2 Hr 59 Min	\$2.00
3 Hr - 4 Hr 59 Min	\$3.00
5 Hr - 7 Hr 59 Min	\$4.00
8 Hr - 24 Hr	\$5.00
24 Hr or longer	\$7.00
Over 48 hours	Rates repeat every 48 hours
1 Week	\$20 at parking office

After admitting, you and your child will be taken to the Epilepsy Monitoring Unit (EMU) on C10 (10TH floor). In the EMU,

- You and your child will meet your nurse and will be oriented to the room
- An EMU/EEG technologist will attach small discs to your child's scalp with tape and skin glue. Your child's head will be wrapped with gauze. The EEG wires from your child's head connect to an electrical box that is placed in a small shoulder pack.
- Your child will be monitored by the EMU technologists and nursing staff during their stay.
- During your stay in the EMU, you will meet several members of the EMU Team
 - **Epileptologist (doctor)** – reads the EEG, orders medications, and develops a treatment plan to manage seizures
 - **Fellow (doctor in training to become an Epileptologist)** – Will participate in daily rounds when the team comes to discuss results and the plan for the day
 - **Advanced Practice Provider (APP) (Physician Assistant or Nurse Practitioner)** – Will obtain a history, perform assessments, place orders for tests and medicines and make daily rounds to report back to the Epileptologist. On the day of discharge, the APP will complete your discharge orders, provide appropriate referrals, and send any necessary prescription refills.

- **EMU Nurse** – gives medicines, performs assessments, and helps keep patients safe
- **EMU/EEG Technologist** – connects your child to the EEG, edits the EEG and ensures good quality recordings
- **Neuropsychologist** – they may test your child to see how well different parts of the brain are functioning.

Your child may also

- have an IV placed
- need other procedures while they are at the hospital
- have times when they are not allowed to eat food or drink for a certain period of time

Causing A Seizure

Our goal is to record typical seizures safely. Having a seizure can feel scary for you and your child. If your child has been admitted to the EMU then your child is having enough seizures to disrupt their life. This is the first step toward finding a treatment plan.

- Your doctor will often need to record more than one seizure to confirm your child's diagnosis and make a plan. Common triggers for seizures are stress, lack of sleep, skipping medicine, or flashing lights.
- You or a family member may be able to point out things that bring on your child's seizures.
- If something specific like schoolwork seems to trigger seizures for your child, it can be helpful for you to bring things from home that will recreate this.
- To cause a seizure while being monitored, we may
 - Reduce or not give the anti-seizure medicine.
 - Photic stimulation (which involves flashing lights).
 - Hyperventilation (where your child will be asked to breathe hard and fast).
 - Sleep deprivation, which means your child will get less sleep than they normally do at home.
- **Do not decrease or stop anti-seizure medications without instructions from your child's doctor.**

For additional procedures such as an **ictal spect scan**, a nurse will stay in the room so they can give a medicine into your child's IV quickly once a seizure starts. Within 4 hours of that medicine being given, your child will then go to an area of the hospital called Nuclear Medicine. Pictures of the brain's seizure activity will be taken. Your child will need to stay completely still during the pictures. Your child may need to have medicine that will make them sleep so they won't move during the pictures. Your medical team will discuss with you what the best plan is for your child.

What Happens When Your Child Has a Seizure?

- A parent or family member must stay with the child to help point out seizures while in the EMU.
- The adult will be given an event button to push when a seizure is starting. The button notifies the nurse and marks the EEG.
- The nurse will then check to make sure your child is safe.

- When safety is confirmed, the nurse will ask your child questions and have them do simple tasks.
- If they experience a long seizure, or a lot of seizures in a certain time period, emergency medicines may be given.

Parent and Child Expectations

Below are things you can do to help make your child's stay in the EMU successful:

- Push the event button for any concern of seizure. It alerts your nurse and EMU technologist. You can also talk out loud what you see, and the microphone will pick up this description.
- Stay in view of the camera. The video part of the EEG gives important clues about the origin and classification of your child's seizures.
- Ask staff members any questions. Discuss observations or concerns. They are there to take care of you and your child.
- Keep your child's bed in the lowest position. If you need the bed raised, please let your child's nurse know.
 - All four side rails of the bed will be raised and covered with soft pads.
 - A nurse or nursing assistant will need to be with your child when they are out of bed.
- Your child should use ear buds instead of earphones.
- Do not touch the EEG wires (electrodes).
- Help your child to not scratch their head. Touching the wires will interfere with the recording and quality of your child's EEG.
- Be careful with the cables. The cables can easily become tangled or caught in the bed's side rails. Call your child's nurse if you have difficulties with any of the wires or cables.
- Bathing – Your child will not be able to shower while connected to the video-EEG. You can use cleansing cloths or wash cloths to clean up your child.
- Clothing – Your child may wear their own clothes. Bring simple and comfortable items such as sweatpants or pajama bottoms and a shirt that opens at the front.
- No chewing gum or hard candy – Chewing gum or sucking on hard candy can interfere with the electrical activity.

Preparing Your Child for Their EMU Admission

Talk to your child about why they need to stay at the hospital. Here are some things to explain:

- Doctors want to take pictures of their brain when a seizure is happening, because this will give the doctors a better understanding of their seizures and how to best help them get better. This picture needs to be taken very quickly after a seizure happens and needs special medicine to show the brain on the pictures better.
- This stay may be different than other times they've been at the hospital.
- They could be at the hospital for up to 6 days.
- They will need to stay in the room most of the time. They may be able to go to the playroom from 10-12 or 2-4 on C10 with permission from their nurse.
- They may be asked to stay up very late past their normal bedtime.
- They may only be allowed to eat and drink at certain times (not their normal mealtimes).

Activities for Your Child During the Admission

Your child will spend most of their time in bed or seated in a chair while waiting for a seizure. This can become boring.

- Bring books, games or puzzles to help pass the time.
- Cable TV and movies are available in each room.
- DVD players are sometimes available.
- If you bring electronic devices from home, the EMU technologist will check to make sure they do not interfere with the EEG.
 - If a device interferes with the EEG, you may be asked not to use it.
 - Turn off the device before recharging it.
 - The hospital is not liable for any damage or loss of personal devices.

Help Your Child Make an Admission Coping Plan

Help your child prepare by discussing the following questions and writing out the answers.

- My name is:
- I am ___ years old.
- Who will be staying with you at the hospital?
- What will you bring with you to the hospital? (Favorite toy, stuffed animal, blankets, pillows, favorite movie, special pajamas)
- What will you do if you start to get bored in your room?
- When it is time for you to attach the EEG, what would you like to do? (Watch a movie, listen to music, squeeze a stress ball)
- When it is time for you to get an IV, what will help you best? (Watch, look away, holding hands, deep breathing, blow bubbles, squeeze a stress ball)

After Your Child's Admission

Doctors will discuss your child's test results. Your child's doctor will meet with our team to discuss all of the information gathered about your child's seizures and decide what other treatments might be helpful, including surgery. Your child will follow up with their doctor as scheduled.

The Epilepsy Monitoring Unit at Children's Health Dallas is a Level 4 Epilepsy Center for children and adolescents. The rating is based upon guidelines recommended by the National Association of Epilepsy Centers. More information at: <https://www.childrens.com/specialties-services/specialty-centers-and-programs/neurology/epilepsy-center>.

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