



Epilepsy Monitoring Unit

Frequently Asked Questions

Littleton Adventist Hospital





If you have been scheduled for a stay in an Epilepsy Monitoring Unit (EMU), or are thinking about a stay, you may have some questions.

What is Epilepsy?

According to the Epilepsy Foundation, epilepsy is a medical condition that produces seizures affecting a variety of mental and physical functions. It's also called a seizure disorder. When a person has two or more unprovoked seizures, they are considered to have epilepsy.

A seizure happens when a brief, strong surge of electrical activity affects part or all of the brain. One in 10 people will have a single seizure in their lifetime. One in 100 people are currently living with epilepsy. One in 26 will be diagnosed with epilepsy during their lifetime.

For more information on epilepsy and seizure types, visit:
epilepsycolorado.org/learn/disorders

What is an EMU?

The Epilepsy Monitoring Unit (EMU) is part of the Brain and Spine Center at Littleton Adventist Hospital. It is designed to take patients 15 years and older who need prolonged video electroencephalogram (EEG) monitoring. The EMU provides the medical team the ability to safely provoke and record seizure activity in a controlled and safe environment so that your doctor can better treat your seizure disorder. In as many as 88 percent of cases, a definitive diagnosis is achieved. Treatment is influenced or improved in as many as 80 percent of these cases.

Why do I need to stay in an EMU?

- Patients may have recurrent spells that may or may not be epileptic seizures. An EMU stay will help to diagnose epilepsy vs non-epileptic spells and/or other underlying medical conditions that mimic seizures.
- An EMU stay allows for medication adjustments for complex epilepsy cases in a safe and controlled environment. It also allows your care providers the ability to evaluate your response to medication changes.
- It will help identify the type, origin, and quantity of your seizures or spells.
- The information gathered during your EMU stay may help to determine if you have a type of epilepsy that may benefit from epilepsy surgery.

What should I do before my admission?

Diet: Maintain your regular diet before admission to the hospital.

Activity: Continue your current activity regimen prior to admission.

Medications: Take your medications as usual. If your doctor instructs you to decrease your medication(s) prior to admission, please do not do so, as this may be unsafe in some cases. If you have questions about this issue, please call the EMU.

Because the EEG recording is continuous, you will not be able to shower during your stay. The EEG electrodes will be attached at all times. This is crucial for getting the most out of your EMU stay. We suggest that you shower and wash your hair prior to arrival and to avoid the use of hair products on admission day. You will be given the opportunity to wash with a basin of water or at the sink as requested throughout your stay.

What should I bring?

- Bring all of your medications. We will review them with you on admission.
- For your comfort, plan to bring lounging clothes like sweatpants, shorts, or pajamas to wear. Tops should either button or zip up the front to allow for monitoring equipment.
- Bring magazines, books, DVDs, laptops, etc. to occupy your time.

What can I expect during my stay?

Continuous video/audio EEG Monitoring

- Traditional EEG monitoring lasts only about 30 minutes. It provides you information about brain activity at just one given moment in time. In your case, it may have been an insufficient duration to diagnose and treat your seizures. In the EMU we do 24/7 continuous video/audio and EEG data recording. This allows us an increased likelihood of capturing your seizures or spells over time.
- By using continuous recording to capture your spells or seizures we can see exactly what happens in the brain during events or between events. Our EMU technicians and nurses are trained to complete a specific seizure assessment during each event. The epileptologist will use the video and audio, combined with the assessment and EEG data, to help identify the type of seizure you are having and where in the brain it might be starting.

It will also help us achieve an accurate count of your seizures and to see if you have more than one type.

Care team members

At Littleton we have a multi-disciplinary team approach to deliver comprehensive and exceptional epilepsy care. All of our EMU care team members have specialized training in caring for patients with seizures or spells. Here are some members of the care team that you may come into contact with:

- **Epileptologist:** An epileptologist is a physician that specializes in seizures and seizure disorders. An epileptologist will be responsible for your EMU care and will direct the rest of the medical team in monitoring, medication adjustments, and measures to elicit seizures or spells.
- **Neuroscience Nurses:** Our nurses are specially trained to care for patients with seizures. A nurse will be assigned to you at all times and will care for you throughout your admission.
- **Critical Care Nurse Assistants:** The nurse assistants are available to assist with your care needs. In addition we have specially trained assistants that will monitor your EEG and Video recording at all times for your safety and to ensure the quality of the recording.
- **Critical Care medical staff or hospitalists:** Our physicians and nurse practitioners are available at all times and will assist in managing your care.
- **Registered EEG technologists:** Our EEG technologists will manage all aspects of the EEG recording. They will meet you on admission and hook up all the EEG monitoring equipment, as well as check it daily.
- **Neuroscience Educator:** A neuroscience educator is available to answer any questions you might have pertaining to your stay.
- **Neuropsychologist:** A neuropsychologist is a psychologist who specializes in the complex connection between behavior and the brain. You may not see a Neuropsychologist as part of a routine EMU admission; however, they play an important role for patients being evaluated for epilepsy surgery.
- **Neurosurgeon:** A neurosurgeon is a surgeon who specializes in brain surgery. A neurosurgeon will be part of your care team if you are being evaluated for Epilepsy surgery.
- **Case Managers and Social Workers:** A case manager or social worker may meet with you to discuss any concerns you might have.

Safety precautions

- **Room safety:** Our primary concern in the EMU is your safety. In light of this we institute several safety precautions such as seizure padding, safety belt use and ambulation assistance. The rails of your bed will be padded to prevent injury for seizures that occur while you are lying down. You may be asked to wear a safety belt while you are sitting in the chair. The safety belt is similar to a seat belt and will prevent you from sliding out of the chair during a seizure or spell. A care provider will be with you at all times when you are not in the bed or the chair. Although this may feel like a loss of independence it is necessary to prevent any injuries that may occur if you were to have a seizure at that time. Due to the monitoring equipment it will not be possible for you to leave your room.
- **IV:** All of our EMU patients will have an intravenous catheter (IV) inserted on admission. This will allow for administration of any seizure rescue medications if necessary.
- **Emergency preparedness:** Our EMU is equipped with all the necessary emergency equipment and personnel.
- For safety, you will be connected to continuous cardiac telemetry and oxygen monitoring.

Length of stay

A typical length of stay is 3-5 days, but this is dependent upon the frequency of your seizures and the purpose of your admission.

What are the rooms like?

Our large, private rooms include numerous comfort and entertainment amenities. They also contain specialized safety and monitoring equipment.

Tests and treatment

- The purpose of the admission is to record seizures or spells in a safe controlled environment. The epileptologist may wean down your seizure medication or stop it if necessary. Aside from medication withdrawal, we may use other methods to elicit your seizures or spells such as photic stimulation (flashing lights), hyperventilation (fast breathing), or sleep deprivation. Although this can sound extreme, we do all interventions with your comfort and safety in mind.
- Additional testing may be ordered for patients being evaluated for surgery and can include MRI, SPECT/CT and/or PET/CT for evaluation of the blood flow or brain metabolism.

Other Information

- You will be informed daily on the progress of the recording session.
- Please note that cigarettes, e-cigarettes, or marijuana use is not permitted during your stay in the EMU. If you are a smoker and would like to request a nicotine patch or other smoking cessation aids during your admission, please let the admitting provider know.
- You will be given complete written discharge instructions on the day you leave the hospital. A member of our nursing staff will assist you to understand these instructions and answer any questions you may have.

Can I do anything during my stay to assist monitoring?

Yes, you will be given an event button to use when you note any spells, abnormal symptoms or feelings. This button push will mark the EEG recording and may assist the epileptologist in reading the EEG. It will also prompt the nursing staff to assess you. The EEG technologist that initiates your monitoring session will explain the use of the event button and call light on the day of your arrival.

We ask that you not chew gum during your admission, because the chewing can interfere with the quality of the EEG recording.

Are visitors welcome?

Yes, you can have visitors. We do ask that any visitors present are mindful of our other patients and their privacy. We strive for a peaceful, healing environment for all our patients.

When will I receive my results?

A complete record of findings and treatment recommendations will be sent to your referring physician from the EMU's attending epileptologist after your discharge. The epileptologist will also discuss the results with you on the day you are discharged home.

What other epilepsy services does LAH offer?

- Comprehensive outpatient management of epilepsy patients
- Outpatient electroencephalogram (EEG) studies
- Quantitative EEG studies

- Long-term video
- EEG monitoring in the Epilepsy Monitoring Unit (EMU)
- Specialized neuroimaging and neurodiagnostic testing for Epilepsy
- Neuropsychological testing
- Surgical treatment for Epilepsy
- Implantation and management of Vagus Nerve Stimulator (VNS) or Responsive Neurostimulation (RNS) devices.

What if they find that I don't have epilepsy?

Our care team can help guide you through the next steps. An EMU admission is still necessary for a definitive diagnosis. Some of our patients have other medical conditions that mimic seizures, in which case we will direct you to an appropriate care provider.

About 50 percent of patients admitted to the EMU have what is called Psychogenic Non-epileptic seizures (PNES). When a person has a seizure they have symptoms that coincide with abnormal EEG activity. In PNES the symptoms may look or feel like seizures, but lack EEG abnormalities. PNES, unlike epileptic seizures, are not the result of a physical brain dysfunction. In PNES, the root cause is often psychological, emotional, or stress-related. Just because the cause is not physical does not mean that the symptoms are not real. It is important to know that if you are diagnosed with PNES, do not be ashamed. It is a very real condition. We understand you may have many more questions about PNES. You can find additional information at: epilepsy.com/article/2014/3/truth-about-psychogenic-nonepileptic-seizures

Additional Resources

1. The American Epilepsy Society
www.aesnet.org
2. The Epilepsy Foundation
www.epilepsy.com
3. The Epilepsy Foundation of Colorado
www.epilepsycolorado.org

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