Epilepsy Monitoring Unit (EMU)
Continuous monitoring

During your stay, you will be attached to an electroencephalography (EEG) machine by electrodes placed on your head. These small disks are attached to a computer that records your brain’s electrical activity.

In the EMU, we continuously record the EEG, with audio and video, to capture all details of your seizures. We combine the brain’s electrical activity with observation of movement and behavior during seizures to make a complete seizure diagnosis. This is very different than outpatient EEGs, during which seizures are typically not recorded. It also allows us to identify seizures you may not even know are occurring, including those in your sleep.

Technicians constantly watch your video and EEG recording. When a seizure occurs, they notify nurses and other staff who immediately respond and keep you safe.

EMU team

Physicians, Physician assistants, EEG techs, Medical assistant and Nurses.

Seizures and epilepsy

Seizures can occur with little or no warning and can be caused by a number of health conditions. They can manifest in various ways, including:

- Uncontrolled movements
- Uncontrolled behavior
- Changes in awareness
During non-epileptic seizures, brainwaves and neuron activity is normal, but a physical seizure is caused by stress or other behavioral health issues.

Epileptic seizures are caused by temporary alterations in the brain’s normal electrical activity that causes brain cells to signal each other at faster rates than normal. A neurological condition diagnosed after at least two seizures not caused by something else, epilepsy can significantly impact the daily lives of individuals and their families, often making it unsafe for them to drive, work at heights, operate heavy machinery or even hold a job.

There are many different kinds of epilepsy and the first step in treatment is to make the right diagnosis. Understanding the specific type of seizure you have helps the epilepsy specialists at Hartford HealthCare’s Ayer Neuroscience Institute recommend the best treatment, which can range from medication changes to surgical interventions. The goal of all treatment is stopping seizures and maximizing your quality of life.

Coming to the EMU

The day of admission

- Be sure your hair is clean and free of sprays and gels so the EEG electrodes will stay in place. You will not be able to shampoo your hair until the EEG is removed at discharge.
- Take your daily medications as instructed by your primary care provider or neurologist.
- Bring your insurance card and ID.
- Pack shirts that button up the front.
- Bring things to help you pass the time such as puzzles, books, cards, CD players, games, etc. Every EMU room has a TV so you can bring DVDS.

When you arrive

- Please arrive 30 minutes before your scheduled appointment at the admission office, 80 Seymour St., Room 128.
- After registering, someone will bring you to your hospital room on the Center 11 floor. All EMU rooms are private with private bathrooms, and contain a reclining chair, drawers and a closet for your clothes. You can secure valuables in a locker.
• EMU team members will help you settle into your room, check your vital signs, ask about your seizures and review your medications.

• An EEG technologist will apply the electrodes to your scalp with a special non-allergenic paste and tape, a process that takes about an hour. They will teach you about the equipment, including the push-button you can use to notify staff if you feel you are having a seizure and the nurse call button for routine care.

• A nurse will place an intravenous (IV) catheter in your arm in case you need medications to stop a seizure quickly.

• Later, your medical providers will review goals for the admission, medication plan and other details. We try to schedule you when your outpatient epileptologist is on the EMU, but that is not always possible.

While you are here

• It’s common for seizures to not occur at first, but we have many days of monitoring to capture information. Visit with your family, play games, watch movies and find ways to pass the time.

• We will record continually on EEG, video and audio systems, as well as heart and breathing monitors. Our staff watches around the clock, ready to respond when you have a seizure.

• Because the monitoring requires many wires and cables, patients generally stay in bed or in the reclining chair. Walking around is limited because we want staff with you whenever you are out of bed in case you have a seizure. Team members will help you around the room and go to the bathroom.
We sometimes use “activation procedures” such as flashing lights and deep breathing to prompt seizures. For the same reason, we might lower or stop your seizure medications, or ask you to stay up late at night.

Your team of epilepsy experts will see you every day and adjust your plan based on what they learn.

Day of discharge

- We usually plan discharge the day before.
- We may restart or adjust your medications the night before so they are fully back in your system when you leave the hospital.
- On the morning of discharge, members of your team will talk to you about what they learned during your EMU stay, the impact this information has on your diagnosis and treatment recommendations. We provide this in writing and your nurses will review it again before you leave.
- We send any prescription changes to your pharmacy.
- We send detailed summaries of your EMU stay to your providers.
**What happens when I have a spell/seizure?**

- If you can, press the event button when you feel a seizure coming. The staff member watching you on video may know you are having a spell/seizure even if you cannot speak or press the button.
- An alert is activated and medical staff quickly comes to you.
- The nurse or EEG tech will ask you questions, do a neurological examination and check your vital signs.
- Staff will monitor you until the spell resolves.
- The team will review your EEG and video recording and notify the epileptologists.
- If the seizure lasts many minutes, we may give you medication through your IV.

**What if I don’t have a spell or seizure?**

- The epileptologists can use flashing lights and deep breathing to prompt seizures.
- We also gain information by watching your EEG for multiple days, including while you sleep. Sometimes, the diagnosis becomes clear even without a seizure.
- You may have to come back for another stay. With persistence, we can usually get the necessary information to provide the best treatment possible.

**Who watches me?**

- You will never be alone during your EMU stay, where nursing staff is present 24 hours a day.
- While the EEG is running, a small camera attached to the ceiling records video reviewed by staff 24 hours a day. They are trained in epilepsy and to interpret movements and sounds. They can often sense auras (the sensation and feelings prior to a seizure) and will listen to your words and monitor your movements.
- The staff alerts the nurse, technician and ancillary staff when you have a spell.

**Can my family stay with me?**

- Because family members are a vital part of your care and often know you best, they can stay with you in the EMU, although it is not required.
- Young children may visit, but only visitors over 18 years old may spend the night.

**Do I bring my medications?**

- Bring all your medications with pharmacy receipts so we have accurate documentation of what you take.
- If the hospital does not have your medication in supply, we may ask you to take your personal medication or a substitute the pharmacist suggests. All medications, including those approved by your pharmacist, will be supplied and administered by nursing staff during your hospital stay.
- The day of admission, take your morning dose of medications as directed by your neurologist or primary care provider unless we’ve told you not to.

**What do I bring for clothing?**

- Bring comfortable clothes.
- Wear tops that zip or button up the front, preferably with side pocket for the EEG equipment. We cannot allow shirts or nightgowns that must be pulled over your head because they will interfere with the EEG wires.

**What happens if I use tobacco daily?**

- Hartford Hospital is smoke-free.
- If you currently use tobacco, let us know so we can evaluate your medical history and provide necessary treatment to prevent symptoms from abruptly stopping.
- You can also talk with your primary care provider about smoking cessation before your EMU visit.
What can I do while in the EMU?

- Phones and laptops are encouraged and the hospital offers free wireless internet access. We will test your electronics when you arrive to make sure it does not interfere with the EEG.
- Bring books, coloring, games and other activities.
- Gum is not allowed because it interferes with the EEG recording.
- Once the EEG starts, you cannot leave your room and will only be able to walk to the bathroom or reclining chair. Remember the purpose of your EMU stay is to record several typical events. Seizures that occur while you are out of camera view are a loss of valuable information that may delay discharge. There is some privacy loss in the EMU, but there are no cameras in the bathrooms.
- Whenever you get up to move, one of our team members will be with you in case you have a spell or seizure. Safety is a top concern and one of our core values at Hartford Hospital, and we want to keep you safe.

Should I bring food?

- We will deliver three meals to your room each day at 8:30 am, 12:30 and 5 pm. Prepared Kosher, vegetarian or other special meals are available upon request.
- You can bring snacks and other favorite foods to make your stay more comfortable.
- We have a refrigerator and microwave to store and heat small amounts of food from home.

How much does it cost to stay in the EMU?

- We only schedule admission after your insurance approves it. The cost to you varies based on your insurance plan, and often can’t be known until after admission.
- We work hard to prevent unnecessary bills and will even cancel admissions at the last minute if we learn of insurance-related issues.

How do I arrange to be evaluated in the EMU?

- Your doctor must refer you for EMU admission. A member of the EMU team will then contact you to schedule your admission.