What is a seizure?

A seizure is a sudden change in electrical activity in the brain that can affect how a person appears, acts or feels for a short time. Some seizures can hardly be noticed, while others are disabling. Often the cause is completely unknown.

What do I need to know after I have a seizure?

When you have a seizure, or a seizure-like event, there are many factors to consider that could impact your daily activities and lifestyle:

- You must stop driving for a period of time if you have had a seizure, loss of consciousness, or any condition that may impair your ability to drive.
- Every state regulates the ability to drive with certain medical conditions. The most common requirement for people with seizures is that they be seizure-free for a specific period of time and submit a doctor's evaluation of their ability to drive safely. See the image below for Michigan Driver Licensing Laws:

<table>
<thead>
<tr>
<th>Law</th>
<th>Michigan</th>
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</thead>
<tbody>
<tr>
<td>DMV Appeal of License Denial</td>
<td>Yes</td>
</tr>
<tr>
<td>Doctors to Report Epilepsy</td>
<td>No</td>
</tr>
<tr>
<td>Periodic Medical Updates Required After Licensing</td>
<td>At discretion of DMV</td>
</tr>
<tr>
<td>Seizure-Free Period</td>
<td>6 months with exceptions</td>
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</table>
• When you are seizure-free for 6 months, then you and your healthcare provider can complete the *Physician’s Statement of Examination form DI-4P* and return this form to the Secretary of State. The Secretary of State, not your health care provider, decides whether or not you have the right to drive.
• Do not drive if you are having seizures or side effects from medicines that affect your ability to drive.
• A team of social workers are available to help you with resources such as transportation.
• Learning to lessen risks is a critical part of living safely after a seizure.
  o Operating heavy machinery, climbing or working at heights may be dangerous for you.
  o Take showers and not baths, and don’t swim unsupervised.
  o Be careful over hot surfaces – or use a microwave.
  o Think about the best way to carry your child.

**What are the signs of an oncoming seizure?**
It is important for you and those around you to be able to: identify seizure activity to:
• Ensure appropriate medical evaluation
• Guide treatment by your healthcare providers
• Avoid unnecessary trips to the emergency room
• Request accommodations at work or school

**Seizures may consist of any of the following:**
• Staring
• Muscle jerking
• Twitching
• Loss of muscle tone
• Convulsions
• Forced head and/or eye turning
• Chewing
• Lip smacking
• Loss of consciousness
• Impairment of consciousness
• Falls
• Grunting
• Loud breathing
• Not breathing

• Crying out
• Tongue biting
• Drooling
• Bowel and/or bladder incontinence, confusion

**When should we call for help?**

Seek emergency evaluation or have someone call 911 if:

• The seizure activity lasts longer than 5 minutes
• You are diabetic or pregnant
• The seizure is repeated without returning to normal consciousness between seizures
• There is any trouble breathing after a seizure ends
• There has been an injury
• You are not starting to return to normal consciousness within 5-10 minutes

If you are evaluated in a hospital outside of Michigan Medicine, the provider can contact your neurology team at Michigan Medicine via the MLINE at (800) 936-3555 to discuss your case.

Please contact the clinic at (734) 936-9010 to set up a follow-up appointment. If you have another seizure, obtain your records from outside hospitals and have them faxed to (734) 615-4991.

**What if I have another seizure?**

If you have another seizure, you should be seen in clinic to discuss additional testing and starting an anti-epileptic drug (AED), if you haven’t already been placed on one.
- Additional testing may include blood work, imaging (such as an MRI) and an EEG (brain wave test, or electroencephalogram).
- You may be started on a seizure medicine, usually called an anti-epileptic drug (AED), such as Keppra (levetiracetam), Lamictal (lamotrigine), Tegretol (carbamazepine), Onfi (clobazam), Depakote (valproate), Fycompa (perampanel), Lyrica (pregabalin), Topamax (topiramate), Zonegran (zonisamide), Vimpat (lacosamide), Trileptal (oxcarbazepine), Aptiom (eslicarbazepine), or Briviact (brivaracetam).
  - Each of these medications are taken on a regular basis
  - Each of these medications may cause side effects, and you should discuss any safety risks with your health care provider. Your health care provider is the best source for individual information.
  - Missing even one dose of seizure medications increases your risk for more seizures.

**What are the triggers for a seizure?**

There are many things can trigger additional seizures. Triggers include:

- Missed doses of seizure medications
- Certain over the counter and prescribed medicines – but this is uncommon.
  
  Always ask your pharmacist before starting a new medication and if the medication is safe for you.
- Sleep deprivation
- Alcohol consumption
- Illicit drug use
- Illness
- Skipping meals
- Dehydration
- Stress
If you are a female of childbearing age, there are additional things to consider.

- Seizure medications may interfere with the effectiveness of birth control pills or injections. Birth control options to consider include barrier methods, intrauterine devices, patch or vaginal ring, injections of progesterone at more frequent intervals, and progestin implants placed under the skin.
- Some seizure medications may increase risk for birth defects, so be sure to discuss pregnancy with your epilepsy provider before you become pregnant.
- We recommend you take 400 mcg of folic acid every day to reduce the risk of birth defects. Some women taking certain seizure medications who are at higher risk may be advised to take a higher dose of folic acid.

**This is what we decided at today's visit:**

We decided to start an anti-epileptic drug (AED) at today’s visit:

☐ yes  ☐ no

Choosing to start an antiepileptic drug after a first seizure is likely to reduce your recurrence risk within the first 2 years, as compared with delaying this decision to see if you go on to have a second seizure. It probably does not affect your long-term chances of being seizure-free.

We decided on additional testing at this time:

☐ yes  ☐ no

In general, for adults with an unprovoked first seizure, the risk for a second seizure (a recurrence) is the highest in the first 2 years. For people without obvious risk factors for seizures this risk is about 35 out of 100, or 35%. Some factors that seem to increase your recurrence risk include:

**Previous brain injury, or brain condition:**

☐ yes  ☐ no
Findings on an EEG recording that indicate a tendency to have seizures:

☐ Yes  ☐ no

Abnormal brain imaging:

☐ Yes  ☐ no

Nocturnal seizure (during sleep)

☐ Yes  ☐ no

You do not have any of these risk factors:

☐ Yes  ☐ no

Your risk for a second seizure is also highest in the first weeks and months then rapidly decreases. If you do not start a medication now and you were to have another seizure, then we would usually recommend starting medication at that time.

Follow up is required at this time:

☐ Yes follow up on: __________

☐ No

Visit the following websites for more information on epilepsy, and Michigan Medicine resources and phone numbers:

- Epilepsy Foundation: https://www.epilepsy.com/
- Epilepsy Foundation of Michigan: https://www.epilepsymichigan.org/
- American Epilepsy Society: https://www.aesnet.org/for_patients
- Physician’s Statement of Examination: https://www.michigan.gov/documents/DI-4P_16784_7.PDF
- All Radiology and Imaging locations: [https://www.uofmhealth.org/conditions-treatments/all-radiology-and-imaging-locations](https://www.uofmhealth.org/conditions-treatments/all-radiology-and-imaging-locations)
- MyUofMHealth Portal: [https://www.myuofmhealth.org/MyChart-PRD/](https://www.myuofmhealth.org/MyChart-PRD/)
- **EEG scheduling:** (734) 936-9035
- **MRI scheduling:** (734) 936-4500
- **Clinic phone number:** (734) 936-9010
- **Clinic fax number:** (734) 615-4991
- **Social Work Resources:** (800) 888-9825

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