



Summary of Evidence-based Guideline for **PATIENTS** and their **FAMILIES**

MANAGING AN UNPROVOKED FIRST SEIZURE IN ADULTS

This information sheet is provided to help you understand the treatment options for adults who have had a first unprovoked seizure. It also looks at risk factors for a second seizure. This information is a service of the American Academy of Neurology (AAN) and the American Epilepsy Society (AES).

The AAN is the world's largest association of neurologists and neuroscience professionals. Neurologists are doctors who identify and treat diseases of the brain and nervous system. The AAN is dedicated to promoting the highest quality patient-centered neurologic care.

The AES is one of the oldest professional organizations for neurologists in the United States. The AES promotes multispecialty communications, scientific research, and exchange of clinical information about epilepsy and seizure disorders.

Experts from the AAN and AES carefully reviewed the available scientific studies on managing adults who have had a first unprovoked seizure. The following information* is based on evidence from those studies. The information summarizes the main findings of the 2015 AAN and AES guideline on managing a first seizure in adults.

There are separate guidelines on managing a first seizure in children. There also are separate guidelines on evaluating a first seizure in adults. To read these earlier guidelines, or to read the full 2015 guideline, visit AAN.com/guidelines.

After a first seizure, it is important to understand the risk of another seizure. This risk is greatest within the first two years. Immediate treatment with an epilepsy drug can lower this risk. Patients should work with their doctors to decide if immediate treatment is right for them.

What is a seizure?

Seizures are events caused by abnormal firing of neurons (brain cells). Brain cells use electrical energy to “fire” messages to one another. When the cells fire abnormally, a seizure may happen. This causes a surge of electrical activity in the brain. For some people, a seizure is a one-time event.

Other people may have recurrent seizures. These may occur the same day or over longer periods of time.

Having a seizure can be frightening. The person may become confused and lose the ability to communicate. The person's muscles may contract repeatedly. In some cases, the person may lose consciousness (black out). Injuries may result from muscle spasms or from falls. In very rare cases, death may occur. But usually seizures are brief events, and the person recovers completely.

This guideline looks specifically at first seizures that are “unprovoked.” These happen for no immediately known reason.

I recently had a seizure for the first time, and I don't know why. How do I know if I am at risk of another seizure?

An adult who has had a first seizure may be at risk for another seizure. The amount of risk depends on certain factors. These include a person's background and health history. The risk also differs from person to person.

Strong evidence* shows that the risk is greatest within the first two years. This risk ranges from 21 percent to 45 percent. In other words, depending on background and health history, the risk:

- May be as low as about a one-in-five chance (or about one in every five people)
- May be as high as almost a one-in-two chance (or almost one in every two people)

There are several risk factors that affect this risk. Strong evidence* shows that the risk is greater for people:

- Who have had a previous (pre-existing) brain problem, such as a head or brain injury, a stroke, or a brain tumor
- Who have EEG test results that show signs of epilepsy

There is moderate evidence* that the risk is greater in people:

- Whose results from brain imaging tests show a significant abnormality
- Whose first seizure happened during sleep (a nocturnal seizure)

What can I do to prevent another seizure?

Epilepsy drugs are drugs used to manage seizures in epilepsy. These drugs also are known as antiepileptic drugs, or AEDs. In some cases, doctors prescribe these drugs immediately after a first seizure. This is done in order to prevent more seizures.

Studies have examined whether immediate treatment is helpful. The studies compared immediate treatment with waiting to treat until after another seizure happened. The results show moderate evidence* that immediate treatment can lower the risk of another seizure within the first two years. However, the evidence is different for treatment over the longer term. According to the studies, beyond three years, getting immediate treatment after a first seizure:

- Is unlikely to increase or decrease the likelihood of long-term improvement or seizure freedom (moderate evidence*)
- May not improve quality of life (weak evidence*)

How can I know if treatment is right for me? What are the risks?

The decision whether to treat immediately after a first seizure is complex and controversial. Epilepsy drugs can cause side effects. There is moderate evidence* that a person's risk of having side effects ranges from seven percent to 31 percent. In other words, depending on background and health history, the risk:

- May be as low as about a one-in-fifteen chance (or about one in every fifteen people)
- May be as high as almost a one-in-three chance (or almost one in every three people)

However, these side effects usually are mild and are not permanent. At the same time, risking another seizure can be dangerous. Seizures can lead to physical injury and can harm the brain.

The use of epilepsy drugs also can affect lifestyle. For example, a person taking an epilepsy drug may be more likely to be given approval for driving.

For people who have had a first seizure, it is very important to:

- Understand their individual risk levels
- Discuss care options with their doctors or care teams

What other information is important to know? What should I ask my doctor or care team?

More research is needed to better understand:

- Health outcomes for people after a first seizure over the long term
- How lifestyle choices are affected by seizures
- Clearer information on risks of side effects from epilepsy drugs
- If and when a person who starts an epilepsy drug and has no more seizures can safely stop taking the drug

It is important to get answers to these questions from a doctor or care team:

- What is my risk of another seizure?
- If I take an epilepsy drug, what side effects might I have?
- What is my risk of having side effects from an epilepsy drug?
- What are my health outcomes long-term if I take an epilepsy drug?

This guideline was endorsed by the American Neurological Association and the World Federation of Neurology.

This statement is provided as an educational service of the American Academy of Neurology and the American Epilepsy Society. It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN and the AES recognize that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

*After the experts review all of the published research studies, they describe the strength of the evidence supporting each recommendation:

Strong evidence = more than one high-quality scientific study

Moderate evidence = at least one high-quality scientific study or two or more studies of a lesser quality

Weak evidence = the studies, while supportive, are weak in design or strength of the findings

Not enough evidence = either different studies have come to conflicting results or there are no studies of reasonable quality

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American Academy of Neurology, 201 Chicago Avenue, Minneapolis, MN 55415

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American Epilepsy Society, 135 South LaSalle Street, Suite 2850, Chicago, IL 60603 • (312) 883-3800 • AESnet.org