

"This book is an essential guide for people with epilepsy and their families, as well as health care professionals."

—IMAD NAJM, MD

Gillette
Children's
Healthcare
Series

EPILEPSY

Understanding
and managing the
condition:
A practical guide
for families

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- Anyone can have a seizure at any point in their lifetime.
- Seizures are more common than epilepsy.
- Up to 10 percent of people will have one seizure in their lifetime, while only 0.8 to 3.8 percent will develop epilepsy in their lifetime.^{19,21,22}

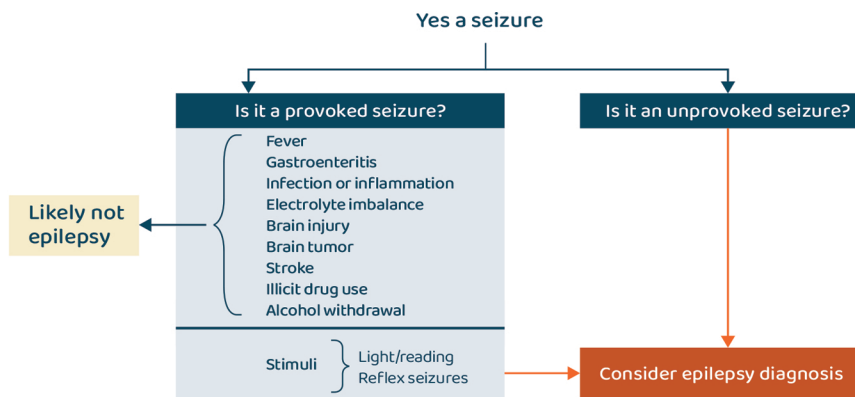


Figure 2.2.1 Decision tree for determining whether seizure is provoked or unprovoked.

An individual who has a first provoked seizure is not likely to have another seizure and is not likely to be diagnosed with epilepsy.^{65,66} Once a provoked seizure has been ruled out, the seizure is termed “unprovoked,” and the medical professional may consider an epilepsy diagnosis. The next steps will include watching for a second seizure and may involve the following:

- EEG
- Brain imaging (MRI or CT)
- Laboratory tests

Epilepsy occurs across the world in all ages, races, and social classes.²³ Disparities exist, however.

- The World Health Organization estimates that over 50 million people worldwide are living with epilepsy, and nearly 80 percent reside in low- and middle-income countries and have less access to antiseizure medications.^{21,24} (Antiseizure medications are medications that work to *prevent*, *reduce*, or *stop* seizures).
- Prevention of epilepsy is believed to be possible in approximately 25 percent of cases.²⁴

The prevalence of epilepsy is increasing, likely because more people are surviving events such as serious head trauma, strokes, brain tumors, and brain infections,^{21,22} and because life expectancy is increasing worldwide (older people are at increased risk for epilepsy).^{22,24}

Seizure First Aid

How to help someone having a seizure

1

STAY with the person until they are awake and alert after the seizure.

- ✓ Time the seizure
- ✓ Remain **calm**
- ✓ Check for **medical ID**



2

Keep the person **SAFE**.

- ✓ Move or guide away from **harm**



3

Turn the person onto their **SIDE** if they are not awake and aware.

- ✓ Keep **airway clear**
- ✓ **Loosen tight clothes** around neck
- ✓ Put **something small and soft** under the head



Call 911 if...

- ▶ Seizure lasts longer than 5 minutes
- ▶ Person does not return to their usual state
- ▶ Person is injured, pregnant, or sick
- ▶ Repeated seizures
- ▶ First time seizure
- ▶ Difficulty breathing
- ▶ Seizure occurs in water

Do NOT

- ✗ Do **NOT** restrain.
- ✗ Do **NOT** put any objects in their mouth.
- ▶ **Rescue medicines can be given** if prescribed by a health care professional

Learn more: epilepsy.com/firstaid



24/7 Helpline: 1-800-332-1000

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Figure 1.3.1 Seizure first aid poster. Reproduced from the Epilepsy Foundation © 2024. Note that 911 is the standard emergency number in the US; other countries have their own emergency telephone numbers. Medical IDs are cards or wearable items that contain health information about the individual that may be helpful for first responders.

Table 2.6.1 Management options for epilepsy

MANAGEMENT	DESCRIPTION	INDICATIONS FOR USE
Pharmaceutical treatments		
Monotherapy	One antiseizure medication (may try a different medication if the first doesn't work)	All types of epilepsy, generally tried first
Polytherapy	More than one antiseizure medication given at the same time (may try different combinations)	All types of epilepsy, when monotherapy does not work
Non-pharmaceutical treatments		
Ketogenic diet	Specialized diet with a very low amount of carbohydrates	Used when polytherapy does not work, or when the epilepsy type, epilepsy cause, or epilepsy syndrome is more responsive to non-pharmaceutical management
Neuromodulation	Repetitive electrical discharges administered through a device (for the management of epilepsy, these devices are surgically implanted)	
Epilepsy surgery	Surgery to areas of the brain where seizures are thought to start or spread to	
Other medications and supplements		
Medications	Medications other than antiseizure medication include: <ul style="list-style-type: none">• Immunotherapies (treatments that alter the immune system)• Steroids (medications with anti-inflammatory properties)• ACTH (a type of hormone therapy)	Used when the epilepsy type, epilepsy cause, or epilepsy syndrome is known to be responsive to a particular medication
Vitamins	Dietary supplements	Used in epilepsy syndromes known to be responsive to a particular vitamin
Medical cannabis	A pharmaceutical form of the cannabis plant	Used in epilepsy types and epilepsy syndromes known to be responsive to cannabis

"This book goes beyond relaying information; it involves comfort, guidance, and knowledgeable support and trust—the art of care."

—MARIA ROBERTA CILIO, MD, PhD

"An invaluable resource for anyone seeking to comprehend the complexities of epilepsy."

—COLIN P. DOHERTY, MD

"Finally! A book that truly helps families understand epilepsy. I wish I had this book at the beginning of my journey. It's a must-read for any family navigating life with epilepsy."

—COLLEEN PETERSON, PARENT

Epilepsy is a condition that can occur at any age. It is often characterized by recurrent, unprovoked seizures. For some individuals, epilepsy will be a life-long condition, while for others it may be a condition they outgrow. This practical guide explains not only the complexities of epilepsy but also details the evidence-based, best-practice treatments that help manage the condition. It also includes the lived experience of families.

The writing of *Epilepsy* was led by Dr. Charbel El Kousseifi, Pediatric Neurologist and Epileptologist at Gillette Children's, a world-renowned center of excellence for the treatment of brain, bone, and movement conditions. *Epilepsy* is part of the Gillette Children's Healthcare Series, a series of books for families who are looking for clear, comprehensive information. Health care professionals, researchers, educators, students, and extended family members will also benefit from reading *Epilepsy*.

Other titles in the series include:

- *Craniosynostosis*
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