

Understanding Epilepsy



Epilepsy, one of the most common neurological diseases in the world, is a chronic disorder characterized by recurrent seizures.¹ Epilepsy is defined as having two or more unprovoked seizures separated by at least 24 hours or after one seizure with a high risk of more.²

What are Seizures?

A seizure is a sudden surge of electrical activity in the brain caused by complex chemical changes that occur in nerve cells.³

Usually, there is a balance of cells that either encourage or stop other brain cells from sending messages. A seizure occurs when there may be too much or too little electrical activity in the brain causing an imbalance.³

Seizures are a symptom of many different disorders that can affect the brain.³



Types of Seizures

There are three major groups of seizures:⁴

PARTIAL-ONSET (focal)

Partial-onset (focal) seizures refer to those that start in an area or network on one side of the brain. They can be localized or spread to larger areas.⁴ About 60% of people with epilepsy experience this type of seizure.⁵

GENERALIZED ONSET (tonic-clonic, absence, or atonic)

Generalized seizures affect both sides of the brain or large networks of cells on both sides from the onset of the event.⁴

UNKNOWN ONSET

This classification is given if the beginning of the seizure is not known and may be changed to a generalized or partial-onset diagnosis once additional testing is completed.⁴

Epilepsy by the Numbers



Nearly 50 million people suffer from epilepsy worldwide, including 3 million adults and 470,000 children in the U.S.^{1,6,7}



Epilepsy is the **fourth most common** neurological disorder and affects people of all ages.⁸



150K NEW CASES of epilepsy are reported in the U.S. each year.⁸

1 in 26 people in the U.S. will develop epilepsy or experience recurring seizures in their lifetime.¹

Epilepsy's Impact

The impact of epilepsy is far-reaching and poses a significant burden on many facets of life for people living with epilepsy and their caregivers:



PSYCHOLOGICAL

People living with epilepsy tend to experience higher rates of psychological conditions, including anxiety and depression.¹



SOCIAL

Even today, people living with epilepsy can experience stigma, discrimination and a negative impact on their overall quality of life.¹ According to a 2019 study fielded by Kantar Health, at least 80% of people with epilepsy and caregivers feel some form of isolation due to their epilepsy.²



TRANSPORTATION

Driving a car, for many, can be critical to employment, socialization, and self-esteem. People with epilepsy say that limitations in being able to drive are one of their main concerns.¹³



EDUCATION

Students with epilepsy are more likely to have difficulties in school, use special education services, and have activity limitations such as less participation in sports or clubs compared to students with other medical conditions.¹¹



SUDDEN UNEXPECTED DEATH IN EPILEPSY (SUDEP)

SUDEP occurs when someone with epilepsy unexpectedly dies when they were previously in good health, where there was no other identifiable cause. Every year, more than 1 in 1,000 people living with epilepsy die from SUDEP.¹⁴ One of the main risk factors for SUDEP is uncontrolled or frequent seizures.¹⁵



ECONOMIC

Epilepsy creates a significant economic burden for the healthcare system. For people living with epilepsy and their families, they experience both direct (outpatient visits, hospital stays) and indirect costs (employment and productivity challenges) due to epilepsy.¹⁰

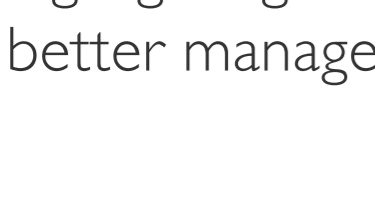


WORKPLACE

58% of caregivers and 47% of people living with epilepsy have had to take time off work in the past year due to epilepsy.²

Current Unmet Need

While important advances have been made over the years, many people living with epilepsy continue to face its disruptive challenges, highlighting the need for new therapies to better manage the condition.

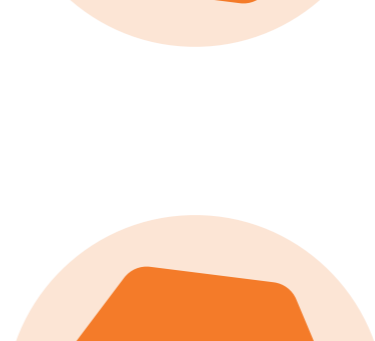


New therapies are being developed to help people living with epilepsy, each with a goal to ultimately help them experience freedom from their seizures.¹⁶

According to the **Centers for Disease Control and Prevention:**



Percentage of adults living with diagnosed epilepsy who take epilepsy medication.¹⁷



Percentage of adults living with diagnosed epilepsy who continue to have seizures.¹⁷

Please always consult a doctor with any questions. For additional information, please visit: www.sk Lifescienceinc.com

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¹ World Health Organization. Epilepsy. <https://www.who.int/news-room/fact-sheets/detail/epilepsy>. Accessed November 2021.
² Epilepsy Foundation. About Epilepsy: The Basics. <https://www.epilepsy.com/learn/about-epilepsy-basics>. Accessed November 2021.
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⁴ Epilepsy Foundation. Types of Seizures. <https://www.epilepsy.com/learn/types-seizures>. Accessed November 2021.
⁵ NINDS. The Epilepsies and Seizures: Hope Through Research. <https://www.ninds.nih.gov/disorders/patient-caregiver-education/hope-through-research/epilepsies-and-seizures-hope-through-research>. Accessed November 2021.
⁶ CURE Epilepsy. What is epilepsy? <https://www.cureepilepsy.org/about-epilepsy/what-is-epilepsy>. Accessed November 2021.
⁷ Zack MM, Kobau R. National and state estimates of the numbers of adults and children with active epilepsy—United States, 2015. *MMWR Morb Mortal Wkly Rep*. 2017;66(31):821-825.
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¹⁰ Allers, K. "The economic impact of epilepsy: a systematic review." *BMC Neurol*. 2015; 15:245.
¹¹ Centers for Disease Control and Prevention. Epilepsy. <https://www.cdc.gov/healthyschools/npao/epilepsy.htm>. Accessed November 2021.
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¹⁴ Epilepsy Foundation. SUDEP FAQ. <https://www.epilepsy.com/learn/early-death-and-sudep/sudep-sudep-faq>. Accessed November 2021.
¹⁵ Devinsky O. Sudden unexpected death in epilepsy. *New Engl J Med*. 2011;365:1801-11.
¹⁶ Chen Z, Brodie MJ, Liew D, Kwan P. Treatment outcomes in patients with newly diagnosed epilepsy treated with established and new antiepileptic drugs: a 30-year longitudinal cohort study. <https://www.ncbi.nlm.nih.gov/pubmed/29279892>. Published online December 26, 2017.
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