

# Understanding Epilepsy



Epilepsy is one of the most common neurological diseases in the world. It is a chronic disorder of the brain that is characterized by recurrent seizures.<sup>1</sup>

An epilepsy diagnosis may happen when a patient suffers two or more unprovoked seizures. A doctor may also make an epilepsy diagnosis after the patient has had just one seizure but is at a high risk of additional seizures.<sup>2</sup>

## What are Seizures?

A seizure is a sudden and temporary surge of electrical activity in the brain<sup>3</sup> caused by complex chemical changes that occur in nerve cells.<sup>4</sup>

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.<sup>4</sup>

Seizures are a symptom of many different disorders that can affect the brain.<sup>4</sup>



## Types of Seizures

There are three major groups of seizures:<sup>5</sup>

### 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.<sup>5</sup> About 60% of people with epilepsy experience this type of seizure.<sup>6</sup>

### 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.<sup>5</sup>

### 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.<sup>5</sup>

## Epilepsy by the Numbers



Around 50 million people have epilepsy worldwide.<sup>1</sup>

An estimated 3 million adults and 470,000 children live with epilepsy in the U.S.<sup>7</sup>



Epilepsy is **one of the most common** neurological disorders in the world and affects people of all ages.<sup>1</sup>



**150K** NEW CASES of epilepsy are reported in the U.S. each year.<sup>8</sup>

**1 in 26** people in the U.S. will develop epilepsy or experience recurring seizures in their lifetime.<sup>9</sup>

## 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.<sup>10</sup>



### SOCIAL

Even today, people living with epilepsy can experience stigma, discrimination and a negative impact on their overall quality of life.<sup>1</sup> 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.<sup>11</sup>



### TRANSPORTATION

Driving a car, for many, can be critical to employment, socialization, and self-esteem. 56% of people living with epilepsy feel it is disruptive not to be able to drive.<sup>11</sup>



### 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.<sup>12</sup>



### ECONOMIC

An analysis to help estimate the cost of epilepsy in the U.S. and published in 2015, found the total direct healthcare costs for people living with epilepsy ranged between \$10k and \$48k per year.<sup>14</sup> Improving seizure control and reducing the economic burden of patients with uncontrolled seizures have been identified as important unmet medical needs for people living with epilepsy.<sup>15</sup>



### 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.<sup>16</sup> Every year, more than 1 in 1,000 people living with epilepsy die from SUDEP.<sup>17</sup> The best way to reduce the risk of SUDEP is to reduce seizures.<sup>18</sup>



### WORKPLACE

Having epilepsy was more strongly associated with higher unemployment rates and job layoffs.<sup>13</sup>

## 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. Seizure freedom is recognized as the goal of epilepsy treatment and is associated with improved quality of life.<sup>19</sup>

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



Percentage of adults living with diagnosed epilepsy who take epilepsy medication<sup>20</sup>



Percentage of adults living with diagnosed epilepsy who continue to have seizures<sup>20</sup>

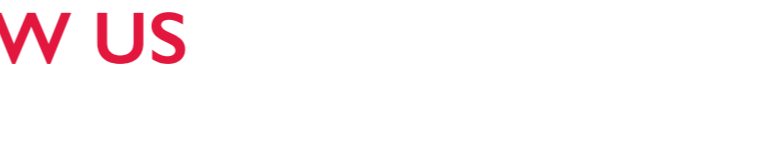
Please always consult a doctor with any questions.

For additional information, please visit:

[www.SKLifeScienceInc.com](http://www.SKLifeScienceInc.com)

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