

**In people over 65, epilepsy is the fourth most common neurological disorder after migraine, dementia and stroke. Although many people are diagnosed in the first two decades of life, it is more likely that epilepsy will develop in later life.**

### What is epilepsy?

Epilepsy is a disruption of the normal electrical activity of the brain that results in seizures. Under certain circumstances anyone can have a seizure. It is only when there is a tendency to have recurrent seizures that epilepsy is diagnosed.

### What are seizures?

A seizure happens when the normal pattern of electrical impulses in the brain is disrupted, causing the brain cells (neurons) to rapidly fire all at once. This can cause symptoms such as changes in sensation, awareness and behaviour, or sometimes convulsions, muscle spasms or loss of consciousness, depending on where the seizure starts and spreads in the brain. Seizures vary greatly and can be from a few seconds to 2-3 minutes. Most seizures are over in less than three minutes. Most seizures seen in this age group have a focal onset.

### Causes of epilepsy

Epilepsy is a disorder with many possible causes, although often the cause is not known. Anything that results in damage or scarring to the brain, such as illness, trauma, lack of oxygen to the brain or abnormal brain development, can lead to seizures. In the over 60s age group the cause of epilepsy is more likely to be identified. Some known causes of epilepsy in seniors are:

- **Stroke.** Seizures occur in more than 15% of people who have had a stroke. Sometimes the first sign of a stroke is a seizure.
- **Blocked arteries or heart disease** or any other conditions that result in not enough blood or oxygen supply to the brain, can result in seizures.
- **Trauma** causing head injuries or brain haemorrhage can also cause seizures.
- **Degenerative conditions** such as Alzheimers/dementia, Parkinsons disease, multiple sclerosis can cause seizures. Alzheimers and epilepsy often co-exist with up to 10% of people with Alzheimer's disease diagnosed with epilepsy.



Provoked seizures are common in the elderly, and often have a reversible cause. By definition, these are not considered epilepsy because the seizures have a known cause and are not likely to recur. Common causes include: acute alcohol withdrawal, metabolic and electrolyte disturbances from illness and/or infections. Certain medications can also reduce seizure threshold in this group, and are best avoided.<sup>1</sup>

### Diagnosis

Diagnosing epilepsy in seniors can be more difficult, particularly if the seizures are subtle, such as focal seizures, and not recognised as seizures. Also, there is a greater chance of other possible diagnoses and a higher frequency of other medical conditions.

One of the most important factors for diagnosing epilepsy is a good description of the seizure.

The description details will include:

- What happened prior to the seizure? This helps to determine if there was a cause or "trigger"
- Was the person unwell prior to the seizure?
- What was the person doing immediately before the seizure?

<sup>1</sup> [http://www.medscape.com/viewarticle/733423\\_3](http://www.medscape.com/viewarticle/733423_3)

- What called your attention to the seizure?
- What did the person do during the seizure – a good description of exactly what they did (or didn't do).
- How long did the seizure last? How long the seizure lasted helps to determine if it was a seizure or other event. Most seizures generally last less than 3 minutes.
- How did the person appear after the seizure?
- How long did they take to recover fully?
- How were they feeling after the seizure?
- Were they confused?
- Could they respond to you?

Often with seizures, there is confusion, tiredness, and sometimes pain or headache afterwards. Recovery can take several minutes to hours.

The doctor will take a detailed medical history and may order tests such as:

- EEG (electroencephalogram) which records the electrical activity of the brain.
- MRI (Magnetic Resonance Imaging) or CT scans that will show detailed images of the brain.
- Blood tests that may indicate other reasons that contributed to seizures such as a chemical imbalance or deficiency, abnormal blood sugar levels or infection.

### Seizure types

Focal dyscognitive seizures [formerly complex partial seizures] are the most common type of seizures seen in seniors. As they are less obvious than tonic clonic seizures, they may not be recognised as seizures and are often attributed to ageing or dementia or considered "funny turns".

There are two main categories of seizures: **focal** and **generalised**.

1. In **focal** seizures, seizure activity remains confined to one or more small areas of the brain. This may only cause minor changes such as altered awareness or consciousness, confusion and a change in behaviour.
2. **Generalised** seizures occur in both sides of the brain simultaneously and consciousness is usually lost immediately. The most recognised generalised seizure is a tonic clonic seizure, where the person often falls to the ground with generalised rhythmic jerking.

### Management

Antiepileptic medications are generally effective in controlling seizures in people with epilepsy. People over the age of 65 can control seizures with antiepileptic medications, but may be more sensitive to the medications and experience unwanted side effects. A low dose may be enough to control seizures and reduce possible unwanted medication effects.

Some unwanted effects include tiredness, unsteadiness, tremor, visual disturbances, changes in mood or behaviour, depression or stomach upsets. It is possible to reduce or eliminate these by adjusting or changing medications. Never do this without consulting your doctor.

**It is dangerous to stop taking antiepileptic medications without speaking to your doctor. Adjusting medication doses without medical advice can trigger more severe seizures which could be life-threatening.**



Image Courtesy The Seniors Edge:  
<http://www.reliantseniors.org/125/neurological-disorders/>

## Medication

- **Interactions with other medications** can occur. Check with the doctor and pharmacist about possible interactions with other medications, even with over-the-counter medications, vitamins or herbal remedies.
- **After-effects of seizures** such as confusion and extreme tiredness can be prolonged, lasting several days in extreme cases. If this occurs, it is important to have a plan and seek support from family, friends or neighbours.
- **Memory problems** affect many people with epilepsy. This may result in forgetting to take medication. Simple ways to help include using a pillbox or an alarm clock or taking medications with meals. On request the pharmacist will put the medications into a pill pack marked with the day and time the medications need to be taken.
- Seizures may cause **falls, fractures or injury**. To reduce the likelihood of injury during seizures, sensible and relevant safety measures are necessary. See our safety factsheet for some suggestions.



## Social concerns

- For some people, it can be difficult to accept and adjust to being diagnosed with epilepsy. Some people struggle to cope with the fear and anxiety of having a seizure.
- **The fear of injury** such as falling in public and taking a longer time to recover from a seizure may contribute to people deciding to isolate themselves. This can be detrimental to physical and emotional well-being, and should be dealt with before it becomes a significant problem.
- Many older people live alone and **safety** can be a concern, especially if seizures are not well controlled.
- **Isolation can lead to feelings of depression**. It is important to keep in touch with family, friends and community groups. Participating in activities and maintaining interests also helps. Talk to the doctor if the depressive symptoms are noticed, as it can happen at any age.
- **Loss of driver's licence** can increase the likelihood of social isolation. People who are having seizures need to check with the doctor before driving. It is vital that the transport authority guidelines for driving and epilepsy are followed.
- **Forgetfulness, poor concentration, memory lapses and mental confusion** can be problems for some older people on medication. Regularly reviewing medications with the doctor may help to reduce these problems.

Epilepsy Action Australia can help with information and support for any of these issues.