



**POST-STROKE EPILEPSY – WHAT IT ACTUALLY MEANS FOR PEOPLE**

**Djamilova Jamila Sattorovna**

Department of Preclinical Sciences of the Asia  
International University. Bukhara, Uzbekistan

**Abstract:** Imagine you or someone you love has a stroke. You get through the scary first days, maybe some rehab, and things start to feel a bit more normal. Then, weeks, months, or even years later... a seizure happens out of nowhere. That's post-stroke epilepsy (PSE), and it's a lot more common than most people realize.

If someone over 60 suddenly starts having seizures for the first time in their life, there's a 30–50% chance it's because of an old stroke—even if the stroke seemed mild or happened years ago. It has officially overtaken Alzheimer's, head injury, and brain tumors as the top trigger.

How many stroke survivors actually get epilepsy? Roughly 1 in 15 to 1 in 20 (about 5–7%) will develop ongoing epilepsy after their stroke. Some studies say the number creeps higher the longer you follow people.

**Keywords:** brain, stroke, hemorrhagic, seizure, early, late.

When do the seizures show up?

Doctors split the post stroke epilepsy into three buckets:

1. Before the stroke even happens (rare—about 1 in 7 of those who seize).
2. In the first week (“early seizures”). These happen to 3–6% of all stroke patients.
3. After the first week (“late seizures”). These are the ones that usually mean real, long-term epilepsy is setting in.

If someone has a seizure in that first week, their odds of getting full-blown epilepsy later skyrocket.

Who's most likely to end up with it?

The biggest warning signs are pretty straightforward:

- The stroke hit the surface of the brain (the cortex)—that's the #1 red flag.
- The stroke was big or left the person very weak/confused at the start.
- They had a seizure in the first week after the stroke.
- Younger stroke patients (yes, younger!) are actually at higher risk—probably because their brains are still “wiring-friendly” and more prone to going haywire.



Some other things doctors argue about: whether the stroke came from a heart clot, or whether it was a bleed instead of a blockage. The evidence is all over the place.

With various degrees of certainty, several risk factors are demonstrated to increase the risk of developing PSE. Among the well-defined risk factors associated with PSE are hemorrhagic stroke, cortical lesions, initial stroke severity, young age, and occurrence of seizures during the acute stroke period. However, other risk factors, such as a cardioembolic mechanism or involvement of specific circulation territories, remain debated. Furthermore, even for the well-established risk factors, contradictory data exists, which can be attributed to differences in study characteristics as well as the complexity of underlying biological mechanisms.

Despite the extensive body of experimental and clinical studies, the exact biological mechanism underlying the formation of epileptic foci after a stroke remains unclear. This may explain why effective strategies to prevent PSE have not yet been developed even though significant progress has been made in stroke treatment, leading to improved post-stroke surveillance and neurological recovery. To advance our understanding and develop effective preventive strategies for PSE, there is a crucial need for further clinical and experimental studies. These studies should aim to elucidate the roles of both well-defined and potential predictors in the development of PSE and unravel the intricate mechanisms contributing to this condition.

Why does a stroke sometimes turn into epilepsy?

When brain cells die from the stroke, scar tissue grows in their place. That scar messes up the brain's electrical system—like bad wiring in a house. Add in ongoing inflammation and some rewiring that goes wrong, and suddenly normal brain signals can trigger a seizure. An early seizure seems to pour fuel on that fire and speed the whole process up.

Is there any way to prevent it?

The most hopeful thing right now is cholesterol pills (statins). People who were already taking a statin (like Lipitor or Crestor) when they had their stroke—or who started one right away—seem to cut their epilepsy risk by half or more in several big studies. Doctors think it's because statins calm inflammation and help protect brain cells. We don't have the final-proof study yet, but a lot of stroke doctors are already prescribing them for this extra reason, especially in high-risk patients.

How do you treat it once it starts?

Thankfully, it's usually pretty straightforward:

- One seizure medicine is enough for most people.
- The newer drugs (levetiracetam/Keppra, lamotrigine/Lamictal, etc.) are gentle and safe even for older folks.
- The catch? These medicines control the seizures, but they don't undo the scarred wiring that's causing the problem in the first place.



### **Conclusion**

Strokes are quietly becoming the biggest epilepsy trigger in the elderly population. We know who's most at risk, we're starting to understand why it happens, and we might already have a cheap, safe drug (statins) that can lower the odds. But we still need better research to turn "might help" into "definitely helps" and to create treatments that don't just put a Band-Aid on seizures—they actually stop epilepsy from developing after a stroke in the first place.

If you or a family member had a stroke, it's worth asking the doctor about seizure risk and whether a statin makes sense—not just for cholesterol, but for protecting the brain long-term.

### **REFERENCES:**

1. Forsgren L., Bucht G., Eriksson S. et al. Incidence and clinical characterization of unprovoked seizures in adults: a prospective population based study. *Epilepsia* 1996;37:224—9.
2. Hauser W.A., Kurland L.T. The epidemiology of epilepsy in Rochester, Minnesota, 1935 through 1967. *Epilepsia* 1975;16:61—6.
3. Прохорова Э.С. Эпилептические припадки при нарушениях мозгового кровообращения у больных гипертонической болезнью и атеросклерозом: Автореф. дисс. ... докт. мед. наук. М., 1982;23 с.
4. Luhdorf K., Jensen L.K., Plesner A.M. Etiology of seizures in the elderly. *Epilepsia* 1986;27:458—63.
5. Lo Y.K., Yiu C.H., Hu H.H. et al. Frequency and characteristics of early seizures in Chinese acute stroke. *Acta Neurol Scand* 1994;90:83—5.
6. Hadjipanayis A., Hadjichristodoulou C., Youroukos S. Epilepsy in patients with cerebral palsy. *Dev Med Child Neurol* 1997;10:659—63.
7. Kammersgaard L.P., Olsen T.S. Poststroke epilepsy in the Copenhagen Stroke Study: incidence and predictors. *J Stroke Cerebrovasc Dis* 2005;14(5):210—4.
8. Leonea M.A., Tonic M.C., Bogliund G. et al. Risk factors for a first epileptic seizure after stroke: A case control study. *J Neurol Sci* 2009;277(1-2):138—42.
9. Alberti A., Paciaroni M., Caso V. et al. Early seizures in patients with acute stroke: Frequency, predictive factors, and effect on clinical outcome. *Vasc Health Risk Management* 2008;4(3):715—20.
10. Devuyst G., Karapanayiotides T., Hottinger I. et al. Prodromal and early epileptic seizures in acute stroke. *Neurology* 2003;61:249—52.