

# How to diagnose and treat post-stroke seizures and epilepsy

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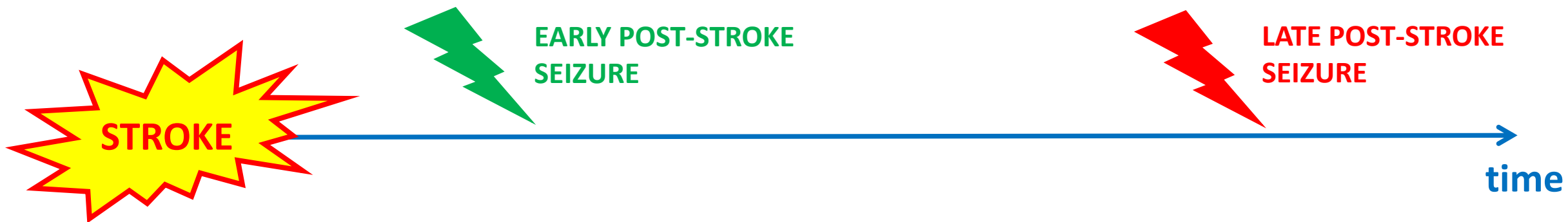
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**LOW RISK OF SEIZURE RECURRENCE**  
~30% in the following 10 years

33.0% (95% CI: 20.7-49.9%)

**HIGH RISK OF SEIZURE RECURRENCE**  
~70% in the following 10 years

71.5% (95% CI: 59.7-81.9%)

*Hesdorffer et al., Epilepsia. 2009;50:1102-8*

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### **POST-STROKE EPILEPSY**

One unprovoked seizure and a probability of further seizures of at least 60% over the next 10 years

*Fischer et al., Epilepsia 2014;55:475-482*

# TREATMENT OF POST-STROKE EPILEPSY: EVIDENCE FROM THE LITERATURE

	Evaluated AEDs	No. of patients	Main findings
<b>Randomised, open-label trials</b>			
Gilad R et al., 2007 <sup>1</sup>	LTG vs CBZ-CR	64	<ul style="list-style-type: none"> <li>• No difference in efficacy</li> <li>• LTG better tolerated</li> </ul>
Consoli D et al., 2012 <sup>2</sup>	LEV vs CBZ-CR	106	<ul style="list-style-type: none"> <li>• No difference in efficacy</li> <li>• LEV better tolerated</li> </ul>
<b>Uncontrolled studies</b>			
Alvarez-Sabín J et al., 2002 <sup>3</sup>	GBP	71	<ul style="list-style-type: none"> <li>• Good efficacy and tolerability</li> </ul>
Belcastro V et al., 2008 <sup>4</sup>	LEV	35	<ul style="list-style-type: none"> <li>• Good efficacy and tolerability</li> </ul>
Kutlu G et al., 2008 <sup>5</sup>	LEV	34	<ul style="list-style-type: none"> <li>• Good efficacy and tolerability</li> </ul>
Huang YH et al., 2015 <sup>6</sup>	PHT, VPA, CBZ, different new AEDs	3,622	<ul style="list-style-type: none"> <li>• VPA and new AEDs more effective than PHT</li> </ul>

AED, antiepileptic drug; CBZ, carbamazepine; CBZ-CR, controlled-release carbamazepine; GBP, gabapentin; LEV, levetiracetam; LTG, lamotrigine; PHT, phenytoin; VPA, valproate.

1. Gilad R et al. Clin Neuropharmacol 2007; 30(4): 189-195; 2. Consoli D et al. Cerebrovasc Dis 2012; 34(4): 282-289; 3. Alvarez-Sabín J et al. Neurology 2002; 59(12): 1991-1993; 4. Belcastro V et al. Epilepsy Res 2008; 82(2-3): 223-226; 5. Kutlu G et al. Epilepsy Behav 2008; 13(3): 542-544; 6. Huang YH et al. Eur J Neurol 2015; 22(11): 1459-1468

# TREATMENT OF POST-STROKE EPILEPSY: PRACTICAL SUGGESTIONS

- There are no strong evidence-based recommendations
- Choices should rely mostly on:
  - RCTs conducted in elderly patients with focal epilepsy of various aetiologies (LEV, LTG, VPA, LCM)
  - Individual considerations
- Tolerability is a major issue (perhaps more critical than efficacy!):
  - Vulnerability of elderly patients to the adverse effects of drugs (“start low and go slow”)
  - Consider comorbid conditions and use of other drugs (drug interactions)
  - Consider renal or hepatic impairment for dose adjustment
  - Risk of impaired recovery after stroke with some drugs (phenytoin, phenobarbital, benzodiazepines)
- Pharmacokinetic interactions are a major issue: preferential use of non-enzyme inducing/inhibiting drugs
- Consider the need for rapid titration (LCM or LEV preferable over LTG)