

Table 2. Medications for Seizure Management*

Drug	Indication	Advantages	Disadvantages	Adverse Events
Carbamazepine (Tegretol [®])	Partial seizures	Minimal sedation and cognitive adverse effects	Ataxia; diplopia; multiple drug interactions	Tremor; hyponatremia; lower WBC; osteoporosis; rash; cognitive changes; drug-drug interactions
Felbamate (Felbatol [®])	Partial seizures—used only in refractory disease	None	Risk of serious adverse events	Aplastic anemia; weight loss; liver failure; gastrointestinal upset; sleep changes; headache
Gabapentin (Neurontin [®])	Partial seizures	No hepatic metabolism; drug interaction only with antacids	Dosage modification needed in patients with renal disease; TID dosing required	Tiredness
Lamotrigine (Lamictal [®])	Partial seizures	Interaction with AEDs only	Dosage modification needed in patients with liver disease	Prolonged half life; rash
Levetiracetam (Keppra [®])	Partial seizures; myoclonic seizures; tonic-clonic seizures	Effective in the treatment of multiple types of seizures	Possible impact on behavior	Unusual thoughts or behaviors; fever; chills; body aches; flu symptoms; depression
Oxcarbazepine (Trileptal [®])	Partial seizures	Low side-effect profile	Photosensitivity; dose should be adjusted when the glomerular filtration rate is <30	Hyponatremia; fatigue; altered cognition
Phenytoin (Dilantin [®])	Partial seizures	Low cost	Many drug and food/nutrient interactions	Peripheral neuropathy; gingival hypertrophy; frozen shoulder; osteoporosis; rash; cognitive changes; drug-drug interactions
Pregabalin (Lyrica [®])	Partial seizures; generalized seizures			Reduced platelet counts; increased blood creatinine kinase levels with associated muscle pain; sedation; dizziness; edema; weight gain; impaired cognition
Tiagabine (Gabitril [®])	Partial seizures	None	Dosage modification needed in patients with liver disease	Slowed thinking; tiredness
Topiramate (Topamax [®])	Partial seizures; generalized seizures	Interaction with AEDs only; weight loss	Weight loss; dosage modification required if creatinine clearance is <60 mL per minute	Weight loss; renal stones; slowed thinking
Valproic acid (Depakene [®])	Generalized seizures; absence seizures	Broad-spectrum efficacy	Extensive protein binding; multiple drug interactions	Tremor; effect on platelet function; drug-drug interactions

*Optimal dosage is based on prevention of seizure, not on reaching therapeutic drug levels. AEDs=anti-epileptic drugs; TID=three times a day; WBC=white blood count.