

NEUROLOGY

COMMON ANTIEPILEPTIC DRUGS: USES, SIDE EFFECTS & INTERACTIONS

Drug	Mechanism	1 st Line Uses	Adjunct in	Other conditions	Side effects	Interactions
Sodium Valproate (Epilim)	Na ⁺ channel blockade	Generalized Absence Myoclonic	Focal	Bipolar disorder Migraines	Hepatotoxicity Pancreatitis Teratogenic	Increased by: Aspirin Erythromycin, OCP Decreased by: Carbamazepine, Carbapenems, Rifampicin Increases: Lamotrigine, Warfarin, Zidovudine
Carbamazepine (Tegretol) Similar to Oxcarbazine	Na ⁺ channel blockade GABA agonist	Generalized Focal		Trigeminal Neuralgia Bipolar Schizophrenia	Bone marrow suppression Increased suicidal ideation Teratogenic	Increased by: Erythromycin, CCB, Grapefruit Decreased by: Phenytoin, Phenobarbital
Lamotrigine	Na ⁺ channel blockade	Generalized Absence	Tonic/ Atonic		Stevens Johnson Syndrome and Toxic Epidermal Necrolysis Affects female menstrual cycle and increases LH & FSH	Increased by: Valproate Decreased by: Carbamazepine, OCP, Phenytoin, Phenobarbital, Rifampicin

Drug	Mechanism	1 st Line Uses	Adjunct in	Other conditions	Side effects	Interactions
Levetiracetam (Keppra)	Possibly Ca ²⁺ blockade	Focal	Generalized Myoclonic		SJS & TEN Marrow suppression Psychiatric disturbance GI upset	Increases: Carbamazepine, Methotrexate
Topiramate (Topimax)	GABA agonist Na ⁺ channel blockade		Generalized Tonic/Atonic Focal		Teratogenic Impairs thermal autoregulation- important if strenuous exercise	When given with Valproate causes CNS toxicity Lithium concentration affected Decreased by: Carbamazepine, Phenobarbital Increases: Phenytoin, Metformin, Decreases: OCP

All antiepileptic drugs are potentially antagonised by Tricyclic antidepressants, SSRIs, Antipsychotics and MAOI,
lowering seizure threshold