

		mech	use	kinetics	SE/tox
prototype drugs	phenytoin	block tetanic firing by inactivating Na ⁺ channels	partial sz, GTC, status epilepticus	low dose: first order, high doses: zero order, inactive metabolite	cardiac arrhythmia, CNS depression, loss of balance
	primadone	same as phenytoin	partial sz, GTC	two metabolites (incl. phenobarbitol)	like phenobarbitol, drowsiness
	carbamazepine	same as phenytoin, potentiates GABA	partial sz, GTC	active metabolite	CNS ataxia, diplopia, nystagmus, dizzy, tolerance to SE, aplastic anemia, rash, Rx interact inhibit metab
	ethosuximide	inhibits T-type Ca ²⁺ channels in thalamus	absence, myoclonic, petit mal, metrazol-induced sz		GI, N/V
	valproic acid	same as phenytoin, reduces T-type Ca ²⁺ channel activity, increases GABA levels	absence sz, MES		N/V, little sedation, severe hepatotoxicity
	diazepam	increase affinity for GABA at GABA _A -R	status epilepticus, tonic-clonic, myoclonic, metrazol-induced, absence (clonazepam)		sedation, tolerance
	phenobarbitol	increase affinity for GABA at GABA _A -R, inhibits glutamate	partial sz, GTC, status epilepticus		sedation, tolerance, nystagmus, ataxia, excitement (peds), confusion (elderly)
adjuvant agents	gabapentin	elevates GABA and binds Ca ²⁺ channel	partial sz, MES		interact w/ cimetidine and Al/Mg antacids
	lamotrigine	like phenytoin blocks Na ⁺ channels, inhibits release of excitatory NTs	same as phenytoin		rash, reduce half life of: phenytoin, primidone, carbamazepine
	vigabatrin	binds GABA-T, inhibits GABA breakdown	partial sz		psychosis (rare), reduces plasma conc of primidone
	topiramate	same as phenytoin	additive w/ other sz Rx		

pregnancy	birth defects: phenobarbitol, phenytoin, trimethadone, valproic acid, Vit K deficiency
intractable epi	surgical removal of focus, vagal nerve stimulation, ketogenic diet
status epilepticus	1. benzodiazepine (lorazepam) --> 2. phenytoin (pyridoxine if < 18 m/o) --> 3. barbiturate (phenobarbitol)