

Mechanisms of Actions of Drugs

- **Phenytoin (Dilantin)-**
 - Selective inhibition of sodium channels inhibiting entry of Na^+ into nerve membranes
- **Carbamazepine (Tegretol)**
 - Same as phenytoin
- **Valproic Acid (Depakote)**
 - Blockade of sodium channels
 - Suppresses calcium influx
 - Augments inhibitory action of GABA

Mechanisms of Actions of Drugs

- **Phenobarbital (a barbiturate which produces generalized suppression of CNS). Can reduce seizures without causing sedation**
 - Potentiates the action of GABA by binding to the GABA receptors and causing the receptors to respond more strongly to GABA itself
- **GABA- gamma-aminobutyric acid**
 - An inhibitory neurotransmitter widely distributed throughout the brain. Activation of GABA increase inhibitory action
 - Benzodiazapines and barbiturates increase GABA by binding to GABA receptors-- Gabapentin acts by promoting GABA release-- Vigabatrin inhibits enzyme that degrades GABA-- Tiagabine inhibits GABA reuptake