

Anti epilepsy drugs

| Drugs | 1st Generation | | | | | 2nd generation | |
|---|---|------------------------------|--|---------------------------------------|---|---|---|
| | Phenytoin | Fosphenytoin | Carbamazepine | Ethosuximide | Valproate | Lamotrigine | Topiramate |
| MOA | <ul style="list-style-type: none"> - Blockade of Na+ & Ca2+ influx into neuronal axon. - Inhibit the release of excitatory transmitters. - Potentiate the action of GABA. | | | Inhibits T- type Ca2+ channels | <ul style="list-style-type: none"> -Enhances GABA synthesis & reduces degradation. - Blocks T-type Ca2+ channels and Na channels | Blockade of Na+ channels | |
| Indications | <ul style="list-style-type: none"> * Partial and generalized tonic-clonic seizures. * In status epilepticus, given IV. | | Drug of choice in partial seizures. | Absence seizures. | It is effective for all forms of epilepsy **Broad spectrum antiepileptic | As add-on therapy Or oa monotherapy partial seizers | Alone for : partial, generalized tonic-clonic, and absence seizures. |
| Important | Not in absence seizure. | | | | | - | |
| ADR's | <ul style="list-style-type: none"> *Gum hyperplasia *Vit D & Folic acid. *Hirsutism *Teratogenic effects | | <ul style="list-style-type: none"> *Hypersensitivity reactions. *Hyponatremia *Water intoxication | Gastric distress | <ul style="list-style-type: none"> - Hepatotoxicity - Thrombocytopenia - Transient hair loss, with re-growth of curly hair. - Weight gain | <ul style="list-style-type: none"> - Influenza-like symptoms. - Skin rashes | <ul style="list-style-type: none"> - Weight loss - Paresthesias |
| Teratogenicity | + | | | - | + | * | + in animal |
| other | Enzyme inducer | | | - | Enzyme inhibitor | Has no effect on microsomal enzymes | |
| | - | Parenteral form of phenytoin | only orally. | given to children | - | | |
| Anti epileptics used in status epileptics Through IV injection of | | | | | | | |
| - Lorazepam - Diazepam - Phenytoin - Fosphenytoin - Valproate - Phenobarbital | | | | | | | |

Drugs used in **Lennox-Gastaut syndrome** : Valproate (1st generation) , Lamotrigine & Topiramate (2nd generation)