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| **Class: Barbiturates**  |
| **Generic Name:**[phenobarbital](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=037c7532-7688-44fd-8c76-d25e8adf5fb5) **Prototype/Brand Name:** Phenobarb**Mechanism:** Alters cerebellar function and depresses actions of the brain and sensory cortex. | **Therapeutic Effects:** * Reduction in seizures
* Sedation
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Orally, IM, or IV
* **Taper dose, do not stop abruptly**
 | * When sedation is needed
* Seizures.
 | * Severe renal and hepatic disorders.
* Severe respiratory depression, dyspnea, or airway obstruction; porphyria.
* Not for children under 1 month.
* Not for use in pregnancy.
* Avoid in geriatric clients.
 | * CNS depression; **overdosage can cause death**
* **May cause suicidal thoughts or behavior**
* Respiratory depression
* GI: Nausea and vomiting
 | * Take as directed.
* May be habit forming
* **Do not take with other CNS depressants or alcohol**
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| **Class:** Benzodiazepines |
| **Generic Name:** [lorazepam](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=ad2a0633-50fe-4180-b743-c1e49fc110c6) **Prototype/Brand Name:** Ativan **Mechanism:** Binds to specific GABA receptors to potentiate the effects of GABA. | **Therapeutic Effects:** * Reduced anxiety
* Reduced seizure activity
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * SL, PO, IV
* Use cautiously in elderly and (may have paradoxical impacts)
* Consider smaller dose for liver dysfunction
 | * To relieve anxiety, reduce seizure activity, or as a preanesthetic
 | * Severe hepatic impairment; respiratory depression; acute narrow angle glaucoma.
* Pregnancy and lactation.
* Not for children under 12
 | * Oversedation and drowsiness
* **Potentially Fatal: Respiratory depression**
* **Overdosage can cause coma and death**

**SAFETY:** Unsteadiness and fall risk. Concomitant use of benzodiazepines and opioids may result in profound sedation, respiratory depression**, coma, and death**. Flumazenil used for overdose | * Monitor for falls risk
* Take as prescribed
* Do not stop taking drug (in long-term therapy) without consulting health care provider.
* Avoid operating motor vehicle or heavy machinery
* Do not consume alcohol
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| **Class: CNS Stimulant**  |
| **Generic Name:** [methylphenidate](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=1f8983ce-71b8-4c62-830d-e4692ddededa)**Prototype/Brand Name:** Ritalin, Concerta**Mechanism:** Thought to block the reuptake of norepinephrine and dopamine into the presynaptic neuron. | **Therapeutic Effects:** Increased mental focus and attention  |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Administer in the morning.
* Do not crush or chew
* Safe for use over the age of 6
* Avoid with CVS disease
 | * Attention deficit disorders
 | * Use of an MAOI within 14 days
* Cardiac disease
* Pregnancy and lactation
 | * *Serious side effects*: **Cardiac and perfusion. Priapism. Mania/ psychosis**
* *Common side effects:* headache, insomnia, upper abdominal pain, decreased appetite, and anorexia. Gynecomastia
* May slow growth in pediatric clients

**SAFETY:** High misuse potential. Monitor BP and HR. Monitor growth/wt in children. | * **Controlled substance**
* Parent teaching
* Clients should avoid alcohol
* Monitor for misuse
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| *Comparing Types of Anti-Depressants* |
| **Class** | **Generic Prototype (Brand)** | **Mechanism**  | **Indication & Therapeutic Effect** | **Contraindications** | **Side Effects**  | **Administration and** **Nursing Considerations**  |
| Tricyclic antidepressants (TCA)  | * [amitriptyline](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=a4d012a4-cd95-46c6-a6b7-b15d6fd5269d) (Elavil)
* [nortriptyline](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=1e0060e6-8c5f-4ddf-8a11-6d158c412f5d) (Aventyl)
 | Inhibits presynaptic reuptake of NE and 5-HT | * Treat depression and insomnia.
* Chronic neuropathic pain
 | * MI & CVS disease
* **Pregnancy, lactation**.
* **glaucoma, urine retention, BPH, GI/GU surgery.**
* **Hx of seizures.**
* **Hepatorenal diseases.**

*Drug Interaction:* * Cimetidine, fluoxetine, ranitidine
* Anticoagulants
* MAOIs
 | * Anticholinergic effects
* CVS effects
* Sedation
* Sexual dysfunction
* Altered seizure threshold

**SAFETY:** Increased risk of suicidality | * Taper for D/C
* Monitor orthostatic BP
* Effect may take 4 wks
* Caution for hepato/renal toxicity
* give at bedtime
* **Immediately report S&S of suicidality**
 |
| Selective serotonin reuptake inhibitors (SSRIs) | * [fluoxetine](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=9de65da4-73f8-4c88-8198-c92e63224ddb) (Prozac)
* [citalopram](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=2632b547-2e13-447f-ac85-c774e437d6a8) (Celexa)
* [sertraline](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=8c8bcba9-eaeb-aa44-f9ea-b580de55a439) (Effexor)
 | Inhibits reuptake of serotonin. | * Primarily used to treat depression,
* Also, for OCD, and other forms of anxiety and stress disorders
 | * Contraindicated with MAOIs
* Use caution with liver dysfunction

*Drug Interaction:* Caution with use of NSAIDS and other drugs that affect coagulation  | * Rash, mania, seizures, decreased appetite and weight, increased bleeding, anxiety, insomnia, photosensitivity

**SAFETY:** Increased risk of s**uicidality** and **serotonin syndrome**. | * Taper for D/C
* Orthostatic BP
* Effect may take 12 wks
* May cause drowsiness
* No alcohol/CNS depressants.
* **Immediately report S&S suicidality or serotonin syndrome**
* Avoid grapefruit
 |
| Serotonin norepinephrine reuptake inhibitors (SNRIs) | [venlafaxine](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=6c7c6190-b35f-4228-ba3d-2cb3149c81b3) (Effexor) | inhibits the reuptake of serotonin and norepinephrine, with weak inhibition of dopamine reuptake. | For treatment of a major depressive disorder. | * Contraindicated with MAOIs
* Caution with use of NSAIDS and other medications that affect coagulation
* Caution in elderly
 | * CVS effects: sustained high BP, high cholesterol
* Rash, mania, decreased appetite and weight, increased bleeding, anxiety, insomnia,
* Somnolence
* Nausea and constipation

**SAFETY:** Increased risk of **suicidality** and **serotonin syndrome**.  | * Taper for D/C
* Effect may take 8 wks
* May cause drowsiness
* No alcohol/CNS depressants.
* **Immediately report S&S suicidality or serotonin syndrome**
* Avoid grapefruit
* Caution for hepato/renal toxicity
 |
| Monoamine oxidase inhibitors (MAOI) | [tranylcypromine](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=6a0b609b-0625-4c26-91a1-59ee3ece3ddf) (**Parnate)** | Inhibits the enzyme monoamine oxidase therefore allowing for increased levels of norepinephrine, dopamine, epinephrine, and serotonin. | Major depressive disorder in adults who have not responded a to other antidepressants.  | * Contraindicated with SSRIs, SRNIs, and many other drugs
* Caution in elderly
* Pregnancy, lactation, children

*Food interaction:* foods containing tyramine | * mania, decreased appetite and weight,
* drowsy/restless
* Hepatotoxicity
* Seizures
* Hypoglycemia in diabetic clients

**SAFETY:** Increased risk of **suicidality, serotonin syndrome and hypertensive crises.** | * Taper for D/C
* Effect may take 4 wks
* May cause drowsiness
* No alcohol/CNS depressants.
* **Immediately report S&S suicidality, serotonin syndrome, hypertensive crises**
* caution with liver dysfunction
* Avoid tyramine
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| **Class: Antimanic** |
| **Generic Name:** [lithium](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=42bed965-4b8f-4471-bcc9-091f87238653)**Prototype/Brand Name:** Lithane**,** Carbotlith, **Mechanism:** alters sodium transport in nerve and muscle cells to shift toward intraneuronal metabolism of catecholamines. specific biochemical mechanism in mania is unknown. | **Therapeutic Effects:** * Reduce symptoms of manic episode
* Reduced frequency and intensity of manic episodes
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Monitor for signs of lithium toxicity
* Monitor serum lithium and sodium levels
 | * Treatment of manic episodes of bipolar disorder
* Maintenance for individuals with a bipolar disorder.
 | * Renal and CVS disease
* Dehydration and use of diuretics.
* Children under 12
* Pregnancy and lactation
 | * **Lithium toxicity (can cause sudden death)**
* Hyponatremia
* Tremor
* Cardiac arrhythmia
* Polyuria
* Thirst
* Dizzy and drowsy
* Weight gain

**SAFETY**: S&S of lithium toxicity requires emergency assistance. | * Take as directed
* When given during a manic episode, symptoms may resolve in 1-3 weeks
* **Must be closely monitored with a narrow therapeutic serum range of 0.6 to 1.2 mmol/L.**
* Serum sodium levels should also be monitored for hyponatremia.
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| *Comparing Types of Antipsychotics* |
| **Class** | **Generic Prototype (Brand)** | **Mechanism**  | **Indication & Therapeutic Effect** | **Contraindications** | **Side Effects**  | **Administration and** **Nursing Considerations**  |
| 1st Generation (Conventional)  | [haloperidol](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=9a6dde83-1c6f-48ca-9451-90b5f2c8689d) (Halidol) | Block dopamine receptors in certain areas of the CNS, such as the limbic system and the basal ganglia. | schizophrenia and Tourette’s disorder | Parkinson’s disease or dementia with lewy bodies.High risk for neurotoxicity with concurrent other antipsychotics | CVS and Respiratory effects*Severe:* **Tardive dyskinesia, neuroleptic malignant syndrome (NMS), and extrapyramidal symptoms**  | * Monitor for CVS and Respiratory event
* Monitor for neurotoxicity
* Avoid alcohol and CNS depressants
* Caution with driving
* Several weeks to take effect

***SAFETY:*** Falls related to sedation, motor instability, and postural hypotension |
| 2nd Generation (Atypical)  | [risperidone](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=c0c3eeb6-8a75-0b20-2008-396e63cddcdb) (Risperidol)  | Block specific dopamine 2 receptors and specific serotonin 2 receptors,  | acute manic episodes and for irritability caused by autism | High risk for neurotoxicity with concurrent other antipsychotics | Fewer adverse effects than conventional antipsychotics. Metabolic changes such as hyperglycemia, hyperlipidemia, and wt gain. |

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| **Class: Anticonvulsant**  |
| **Generic Name:** [phenytoin](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=5b17816d-5b7f-4e4b-9471-30c93822afe8)**Prototype/Brand Name:** Dilantin**Mechanism:** interfering with sodium channels in the brain, resulting in a reduction of sustained high-frequency neuronal discharges. | **Therapeutic Effects:** * Reduced seizure activities
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Must be administered slowly
* IV: cardiac monitoring and in-line filter
* caution in clients with renal or hepatic impairment.
* Elderly clients may require dosage adjustment.
 | Decrease or prevent seizure activity | * Pregnancy
* Heart block
* Several drug interactions
 | *Common adverse reactions*: Reactions include nystagmus, ataxia, slurred speech, decreased coordination, somnolence, and mental confusion**SAFETY: *Serious/fatal effects:* dermatologic reactions, TEN, SJS, DRESS, Hematopoietic complications, Acute hepatotoxicity**  | * Requires serum drug monitoring
* Taper dose; do not stop abruptly
* Monitor blood glucose closely
* Avoid alcohol and CNS depressants
* Must administer slowly.
* Discontinue at first sign of a rash
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| **Class: Anticonvulsant**  |
| **Generic Name:** [levetiracetam](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=c508a392-0603-477d-8a45-3ec550371111)**Prototype/Brand Name:** Keppra**Mechanism:** Exact mechanism unknown. May interfere with sodium, calcium, potassium, or GABA transmission. | **Therapeutic Effects:** * Reduction of seizure activity
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Monitor plasma levels for pregnant women
* Use cautiously if renal impairment
* Safe for children 12 and older
 | Adjunctive therapy in the treatment of partial onset seizures  | * Clients who are suicidal
* Clients with altered hematology
 | * Behavioral/mood changes
* Somnolence, fatigue, and irritability
* Coordination difficulties

**SAFETY:** *Serious/fatal effects* **Anaphylaxis or angioedema,dermatologic reactions, TEN, SJS, Hematopoietic complications,**  | * Taper dose: **do not stop abruptly or seizures may occur**
* monitor carefully for suicidality during medication therapy.
* Monitor for safety mobility and falls risk.
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| **Class: Anticonvulsant**  |
| **Generic Name:** [gabapentin](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=f2d9c3de-4749-4265-a26e-50026ab46ee4)**Prototype/Brand Name:** Neurontin**Mechanism:** The exact mechanism of action is unknown. It is structurally like GABA but does not act on GABA receptors or influence GABA. | **Therapeutic Effects:** * Reduction in seizures
* Reduction in neuropathic pain
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Administer first dose at bedtime to decrease dizziness and drowsiness
* Caution in use with children and elderly
 | Adjunct treatment for partial seizures, Most often used to treat neuropathic pain. | Pregnancy  | * Increased suicidal ideation
* **Immediately report fever, rash, and/or lymphadenopathy**
* CNS depression: dizziness, somnolence, and ataxia
* **DRESS**

**SAFETY:** Consider falls precautions for elderly. **Monitor closely for suicidal ideation and DRESS syndrome.**  | * Do not take within 2 hours of antacid medications.
* Taper dose; do not stop abruptly
* Monitor for worsening depression, **suicidal thought**s, or behavior, and/or any unusual changes in mood or behavior
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| **Class: Antiparkinson agent**  |
| **Generic Name:** [carbidopa/levodopa](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=0caee228-12c7-437c-9ea6-06b4e51722e1)**Prototype/Brand Name:** Sinemet**Mechanism:** levodopa is presumably converted to dopamine in the brain. Carbidopa is combined with levodopa to help stop the breakdown of levodopa before it can cross the blood-brain barrier. | **Therapeutic Effects:** * Reduced progression of symptoms of Parkinson’s disease
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Avoid high-protein diets
* Monitor hepatic, renal, and hematopoietic functions
* Use in clients over 12
* If gastric irritation, eat food shortly after
 | To treat Parkinson’s and is usually started as soon as the client becomes functionally impaired.Also used to treat restless leg syndrome. | contraindicated for use with MAOIs.  | * Depression, suicidal ideation, hallucinations, and intense urges
* Somnolence and fatigue
* NMS symptoms
* Dyskinesia
* Discolored body fluids
* Hypomobility with long-term use
* Higher risk for melanoma

**SAFETY: observe carefully for depression with suicidal ideation.**  | * Can take several weeks to see effects
* Taper dose when stopping
* Plan mealtimes around med times
* monitor for new lesions
* Monitor for sudden somnolence and depression
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| **Class: Antiparkinson agent, MAO Type B Inhibitor**  |
| **Generic Name:** [selegiline](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=ec4ac73b-63b0-4621-a64b-8257ee53c1b3)**Prototype/Brand Name:** Eldepryl**Mechanism:** Selegiline inhibits MAO-B, blocking the breakdown of dopamine. | **Therapeutic Effects:** * Reduction in progression of Parkinson’s disease symptoms
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| Avoid foods with tyramine | Used in conjunction with carbidopa-levodopa when clients demonstrate a deteriorating response to this treatment.  | tyramine | Side effects are dose-dependent, with larger doses posing a hypertensive crisis risk if there is consumption of food or beverages with tyramine. | * may cause increased drowsiness, dizziness, and orthostatic changes.
* Report any abnormal behaviours to HCP
 |

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| **Class: Anti-Parkinson Agent, Antiviral**  |
| **Generic Name:** [amantadine](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=4157d9a7-a53f-4dde-b051-fe3e9a674913)**Prototype/Brand Name:** Symmetrel**Mechanism:** Exact mechanism unknown. Antiviral drug that acts on dopamine receptors | **Therapeutic Effects:** * Reduction in progression of Parkinson’s disease symptoms
 |
| **Administration** | **Indications** | **Contraindications** | **Side Effects** | **Nursing Considerations** |
| * Monitor renal function
* Monitor mental state
* Assess blood pressure
 | Used in the early stages of Parkinson’s disease but can be effective in moderate or advanced stages in reducing tremor and muscle rigidity. | Known hypersensitivity  | * Increased suicidality and urges
* CHF and peripheral edema
* **Neuromalignant syndrome (NMS)**
* Orthostatic hypotension
* Nausea, dizziness, and insomnia
* Anticholinergic side effects
 | * Taper dose carefully
* Monitor BP
* **Monitor for suicidal thoughts or behavior, and/or any unusual changes in mood or behavior**
 |