

Medications

Carbamazepine

Valproic Acid

Lamotrigine

Oxcarbazepine and topiramate are less frequently used and recommended for maintenance treatment of bipolar disorder.

Purpose

Heal treat and manage bipolar disorders by various mechanisms

Slowing the entrance of sodium and calcium back into the neuron and thus extending the time it takes for the nerve to return to its active state

Inhibiting glutamic acid (glutamate) which in turn suppresses CNS excitation

Therapeutic Uses

Treatment and prevention of relapse of mania and depressive episodes

Especially useful for clients who have mixed mania and rapid cycling bipolar disorders

Complications of Lamotrigine

Complication	Nursing Action and Education
Double vision, blurred vision, dizziness, headache, nausea, and vomiting	Caution clients about performing activities requiring concentration or visual acuity
Serious skin rashes: stevens-johnsons syndrome	Instruct clients to withhold medications and notify the provider if rash occurs. To minimize the risk of serious rash, the initial dosage should be low and advanced slowly

Contraindications/ Precautions

Carbamazepine and valproic acid are pregnancy risk category D and can result in birth defects

Lamotrigine is a pregnancy risk category C, but can cause cleft lip and palate if taken during the first trimester. Clients should discuss breastfeeding while taking lamotrigine with the provider

Carbamazepine is contraindicated in clients who have bone marrow suppression or bleeding disorders. Clients should avoid breastfeeding

Valproic acid is contraindicated in clients who have liver disorders. Clients of child-bearing potential should use contraception while taking valproic acid

Monitor plasma valproic acid and Carbamazepine levels while undergoing treatment. The therapeutic blood level range for Carbamazepine is 4 to 12 mcg/mL. Therapeutic blood level range for valproic acid is 50 to 120 mcg/mL.

Complications of Carbamazepine

Complication	Nursing Action and Education
CNS effects: Cognitive function is minimally affected, but CNS effects can include nystagmus, double vision, vertigo, staggering gait, and headaches	Administer low dose initially, then gradually increase dose. Administer dose at bedtime. Avoid driving and other activities that involve alertness at the beginning of treatment. CNS effects should subside within a few weeks

Complications of Carbamazepine (cont)

Blood Dyscrasias: leukopenia, anemia, thrombocytopenia
 Obtain baseline CBC, and platelet, and perform ongoing monitoring. Observe for indications of bruising and bleeding of gums. Monitor and report sore throat, fatigue, or other indications of infection or bleeding

Teratogenesis avoid use in pregnancy

Hypo-osmolality: promotes secretion of ADH, which inhibits water excretion by the kidneys and places clients who have heart failure at risk for fluid overload.
 Monitor blood levels of sodium levels. Monitor for edema, decreased urine output, and hypertension

Skin disorders: dermatitis, rash, stevens-Johnson syndrome (which is potentially life threatening)
 Treat mild reactions with anti-inflammatory or antihistamine medications. Wear sunscreen. Notify provider if stevens-johnsons syndrome rash occurs and withhold medication

Hepatotoxicity: evidenced by anorexia, nausea, vomiting, fatigue, abdominal pain, and jaundice
 Assess baseline liver function, and monitor liver function regularly. Avoid using in children under 2. Administer lowest effective dose. observe for indications and notify provider if they occur.

Complications of Valproic Acid

Complication	Nursing Action and Education
GI Effects: nausea, vomiting, indigestion	Manifestations are usually self-limiting. Take medications with food or switch to enteric coated pills to reduce GI effects.
Hepatotoxicity: anorexia, nausea, vomiting, fatigue, abdominal pain, jaundice	Assess liver function, and monitor liver function regularly. Avoid using in children younger than 2. Administer lowest effective dose. Notify provider if they occur.
Pancreatitis: nausea, vomiting, abdominal pain	Monitor amylase levels. Discontinue medication if pancreatitis develops
Thrombocytopenia	monitor platelet counts. Observe for manifestations (bruising) and notify the provider
Teratogenesis	Avoid use in pregnancy
Weight Gain	Follow a healthy low calorie diet, engage in regular exercise, and monitor weight

Interactions for Carbamazepine

Indications	Nursing Action and Education
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Interactions for Carbamazepine (cont)

Oral contraceptive, warfarin	Concurrent use causes a decrease in the effects of these medications due to stimulation of hepatic metabolizing enzymes. Monitor for therapeutic effects of warfarin. Dosage can be adjusted.
Grapefruit juice: inhibits metabolism, thus increasing carbamazepine levels	avoid intake of grapefruit juice
Phenytoin and phenobarbital: decrease the effects of carbamazepine by stimulating metabolism	Monitor phenytoin and phenobarbital levels. Adjust dosage of medications as prescribed

Interactions for Lamotrigine

Interaction	Nursing Action and Education
Carbamazepine, phenytoin, and phenobarbital: these promote liver drug metabolizing enzymes, thereby decreasing the effect of lamotrigine	Monitor for therapeutic effects. Adjust dosage of medications as prescribed
Oral contraceptives: Lamotrigine can reduce progestin levels, estrogen-containing contraceptives can reduce levels of lamotrigine	Lamotrigine dosage change can be required when beginning or stopping oral contraceptive therapy

Interactions for Lamotrigine (cont)

Valproic Acid: inhibits metabolizing and thus increases the half life of lamotrigine	Monitor for adverse effects. adjust dosage of medication as prescribed
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Interactions of Valproic Acid

Interaction	Nursing Action and Education
Phenytoin and Phenobarbital: blood levels of these medications are increased when used concurrently with valproic acid	Monitor phenytoin and phenobarbital levels. Adjust dosage of medications as prescribed.

Nursing Evaluation of Medication Effectiveness

Depending on therapeutic intent, effectiveness is evidenced by the following
Relief of manifestations of acute mania (flight of ideas, excessive talking, agitation) or depression (fatigue, poor appetite, psychomotor retardation)
Mood stability
Ability to preform ADLs
Improved sleeping and eating habits
Appropriate interactions with peers