TOPIRAMATE:

Class: Anticonvulsant

Indications: Epilepsy

Migraine

Diabetic neuropathy, infantile spasms, neuropathic pain; prophylaxis of cluster headache

Available dosage form in the hospital: TAB (25MD,50MG,100MG)

Dosage:

Note: Do not abruptly discontinue therapy; taper dosage gradually to prevent rebound effects. (In clinical trials, adult doses were withdrawn by decreasing in weekly intervals of 50-100 mg daily gradually over 2-8 weeks for seizure treatment and by decreasing in weekly intervals by 25-50 mg daily for migraine prophylaxis.)

-***Epilepsy, monotherapy:*** Partial-onset seizure and primary generalized tonic-clonic seizure: Oral:

-Immediate release: Initial: 25 mg twice daily; may increase weekly by 50 mg daily up to 100 mg twice daily (week 4 dose); thereafter, may further increase weekly by 100 mg daily up to the recommended dose of 200 mg twice daily.

-Extended release: Initial: 50 mg daily for 1 week; may increase weekly by 50 mg daily up to 200 mg once daily (week 4 dose); thereafter, may further increase weekly by 100 mg daily up to the recommended dose of 400 mg once daily.

Canadian labeling: Oral: Immediate release: Initial: 25 mg once daily (in evening); may increase to 25 mg twice daily in weeks 2 or 3 and up to 50 mg twice daily by weeks 3 or 4; may further increase weekly in increments of 50 mg daily up to recommended maximum of 200 mg twice daily.

-***Epilepsy, adjunctive therapy:*** Partial-onset seizure, primary generalized tonic-clonic seizure, or Lennox-Gastaut syndrome: Oral: **Note:** Doses >1600 mg have not been studied.

-Immediate release: Initial: 25 mg once or twice daily for 1 week; may increase weekly by 25-50 mg daily until response; usual maintenance dose: 100-200 mg twice daily (partial-onset seizures) or 200 mg twice daily (primary generalized tonic-clonic seizures). Doses >400 mg have not shown additional benefit for treatment of partial-onset seizures.

-Extended release: Initial: 25-50 mg once daily for 1 week; may increase weekly by 25-50 mg daily until response; usual maintenance dose: 200-400 mg once daily (partial-onset seizures, Lennox-Gastaut syndrome) or 400 mg once daily (primary generalized tonic-clonic seizures). Doses >400 mg daily have not shown additional benefit for treatment of partial-onset seizures.

Canadian labeling: Oral: Immediate release: Initial: 25 mg once or twice daily; may increase weekly by 50 mg daily up to the recommended dose of 100-200 mg twice daily (maximum recommended dose: 800 mg daily; doses >400 mg daily have shown no additional benefit).

-***Migraine prophylaxis:*** Oral: Immediate release: Initial: 25 mg once daily (in evening); may increase weekly by 25 mg daily up to the recommended dose of 100 mg daily given in 2 divided doses. Doses >100 mg daily have shown no additional benefit.

-***Cluster headache prophylaxis (unlabeled use):*** Oral: Initial: 25 mg daily, titrated at weekly intervals in 25 mg increments, up to 200 mg daily(Pascual, 2007)

-***Diabetic neuropathy (unlabeled use):*** Oral: Initial: 25 mg daily, titrated at weekly intervals in 25-50 mg increments to target dose of 400 mg daily in 2 divided doses (Raskin, 2004; Thienel, 2004)

Geriatric

Most older adults have creatinine clearances <70 mL/minute/1.73 m^2; obtain a serum creatinine and calculate creatinine clearance prior to initiation of therapy. An initial dose of 25 mg/day may be recommended, followed by incremental increases of 25 mg at weekly intervals until an effective dose is reached; refer to adult dosing for titration schedule.

Renal Impairment:

Cl_{cr} <70 mL/minute/1.73 m^2: Administer 50% dose and titrate more slowly.
Hemodialysis: Supplemental dose may be needed during hemodialysis

Hepatic Impairment:

Clearance may be reduced; however the manufacturer's labeling provides no specific dosing recommendations

Common side effect:

Central nervous system: Somnolence (15% to 29%), dizziness (4% to 25%; dose dependent), fatigue (9% to 16%; dose-dependent), nervousness (9% to 18%), ataxia (6% to 16%), psychomotor slowing (3% to 13%; dose dependent), speech problems (2% to 13%), memory difficulties (2% to 12%), behavior problems (children 11%), confusion (4% to 11%)
Endocrine & metabolic: Serum bicarbonate decreased (dose related: 7% to 67%; marked reductions [to <17 mEq/L] 1% to 11%)
Gastrointestinal: Anorexia (4% to 24%; dose dependent), nausea (6% to 10%; migraine trial: 9% to 14%)
Neuromuscular & skeletal: Paresthesia (1% to 11%; migraine trial: 35% to 51%)
Ocular: Abnormal vision (2% to 13%)
Respiratory: Upper respiratory infection (migraine trial: 12% to 14%)
Miscellaneous: Injury (14%

Pregnancy Risk Factor: D