

Physician Info

Disclaimer

Topiramate for the treatment of alcohol dependence, or any other addiction, is not currently approved by the Food and Drug Administration. Please refer to current prescribing information from the manufacturer.

We have published data supporting that topiramate, is efficacious at reducing cravings and heavy drinking and improving abstinence among alcohol-dependent individuals. Additionally topiramate was found to be superior to placebo at improving the quality of life and overall clinical condition, and at reducing the severity of addiction and harmful consequences of heavy drinking.

Mechanism of Action in Alcoholism

Topiramate principally acts to potentiate the inhibitory GABA A receptor mediated input and antagonize excitatory glutamatergic afferents to the corticomesolimbic dopaminergic system. The end result is a modulation of dopamine release. And since dopamine is implicated in the reward system, this should act to decrease the reinforcing effects of alcohol and cravings.

Dosing

Escalating dose schedule starting at 50 (25 mg x 2) mg every night, increasing the dosage by 50 mg/week divided BID for the next 6 weeks as tolerated, reaching a maximum dose of 300mg.

Outside of the dose-escalating schedule, it is suggested to increase by no more than 100 mg/day as needed.

In summary, it is advisable to gauge appropriate dose titration by patient tolerability.

Dose Taper When Discontinuing:

It is suggested to taper down topiramate before stopping it as a consequence of reports of withdrawal induced seizure. Patients who are at greater risk for experiencing this adverse event are the ones with known lower threshold for seizure. The dose tapering can be done by a 30% reduction every 2-3 days.

Monitoring

Creatinine Clearance > 60 ml/min calculated by the Cockcroft-Gault equation. Topiramate is minimally metabolized by the liver and excreted mostly unchanged in the urine. Use cautiously in the elderly, and those with cognitive impairments.

Elevated hepatic enzymes have occurred.

Monitor serum bicarbonate or CO₂ for metabolic acidosis.

Notable Drug Interactions

Combining topiramate with other carbonic anhydrase inhibitors may precipitate kidney nephrolithiasis.

Topiramate may reduce the efficacy of oral contraceptives (ethinyl estradiol component), potentially resulting in unintended pregnancies or break through bleeding.

Hydrochlorothiazide may increase topiramate, and may decrease serum potassium levels more than either agent alone.

Topiramate combined with other anticonvulsants could alter the concentration of either agent. Concomitant use of topiramate and valproic acid is associated with hyperammonemia with or without encephalopathy.

Common Adverse Effects

Nausea; Asthenia, Ataxia, Confusion, Disorder of language, Dizziness, Memory impairment, Nystagmus, Paresthesia, Somnolence, Speech problem, Tremor, Unable to concentrate; Angle-closure glaucoma, acute, Diplopia, Myopia, Secondary angle-closure glaucoma; Motor retardation, Nervousness; Dysmenorrhea, Pain of breast; Fatigue

REFERENCES

Johnson, B.A. (2005) *Recent advances in the development of treatments for alcohol and cocaine dependence: Focus on topiramate and other modulators of GABA or glutamate function. CNS Drugs: 19(10); 873-896.*

Micromedix®, Drugdex® Evaluation of topiramate online at <http://www.micromedex.com/>. Accessed on January 19, 2007