

# UVA researchers make pivotal breakthrough in alcohol addiction treatment

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Alcoholism is a devastating disease in part because of the 'symptom' of heavy drinking but more so due to the extensive harm it causes physical organs, such as the heart and liver, as well as damage to an individual's psychosocial well-being that decreases quality of life.

Remarkably, and for the first time, addiction experts led by a University of Virginia Health System team report the results of a clinical trial whereby an effective therapeutic medication, topiramate, not only decreases heavy drinking but also diminishes the physical and psychosocial harm caused by alcohol dependence.

"What we've found is that topiramate treats the alcohol addiction, not just the 'symptom' of drinking," says lead author Professor Bankole Johnson, D.Sc., M.D., Ph.D., M.Phil., FRCPsych., chairman of the UVA Department of Psychiatry and Neurobehavioral Sciences, of the nationwide 14-week trial involving 371 male and female diagnosed alcoholics.

Study results, published in the June 9 issue of the *Archives of Internal Medicine*, indicate that topiramate was more efficacious than placebo in decreasing body mass index (BMI) and all liver enzymes including the log plasma gamma-glutamyl-transferase ratio, which is the objective marker of heavy drinking.

Topiramate was considerably more efficacious than placebo in reducing both systolic and diastolic blood pressure by a mean difference of 9.70

mm Hg and 6.74 mm Hg, respectively. Topiramate also significantly lowered plasma cholesterol levels by an average of 16.4 mg/dL compared with a reduction of 5.7 mg/dL with placebo. Notably, these combined effects suggest that topiramate may decrease the risk of heart disease in alcohol dependent individuals.

"Many alcoholics have hypertension, and some receive anti-hypertensive medication, which can complicate their treatment for alcoholism," explains Johnson. "Because topiramate can reduce drinking substantially and decrease blood pressure significantly, this allows one medication to be given instead of several."

By decreasing liver enzymes and cholesterol levels, topiramate also may reduce the risk of fatty liver disease, which leads to cirrhosis – a common consequence to end-stage liver disease leading to death in alcoholics.

Additionally, topiramate significantly contributed to a decline in obsessive thoughts and compulsions about using alcohol. Topiramate also had a greater quality of life improvement than placebo in general activities, leisure activities and household duties, as well as a reduction in sleep disturbances.

The Food and Drug Administration has approved topiramate for seizures and migraine headaches, but it is not currently approved for treating alcohol dependence. Ortho-McNeil Neurologics, Inc., manufactures topiramate and provided study funding.

Source: University of Virginia

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