

# Weight loss drug helps curb cocaine addictions, study finds

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The drug topiramate, typically used to treat epilepsy and more recently weight loss, may also help people addicted to both cocaine and alcohol use less cocaine, particularly heavy users, researchers in the department of Psychiatry at Penn Medicine report in a new study published in *Drug and Alcohol Dependence*. Results from the double-blind, placebo-controlled trial adds to the growing body of evidence supporting topiramate as a promising medication to treat addiction.

Past, separate studies have shown that topiramate can reduce alcohol dependence, as well as reduce relapse to cocaine; however, its use to treat both alcohol and cocaine dependent people has not been explored in a clinical trial. Cocaine and alcohol addictions often go hand in hand, so therapies targeting both may be the best strategy to treat individuals.

Results of the 13-week clinical trial of 170 alcohol and cocaine dependent people produced mixed results: The [drug](#) reduced alcohol cravings, but did not reduce drinking, and was not better at reducing cocaine cravings. Addicts on topiramate, however, versus those on a placebo were more likely to stay in treatment and abstain from cocaine during the last three weeks of the trial. People with more severe cocaine withdrawal symptoms— agitation, restless behavior, and [depressed mood](#)—appeared to have benefited most from topiramate.

"Cocaine dependence continues to be a significant public health concern in the United States and Europe. Drug counseling remains the treatment of choice, but many patients do not respond completely to it, so

developing effective medications for treatment is a research priority," said first author [Kyle M. Kampman, MD](#), professor of Psychiatry at the Perelman School of Medicine at the University of Pennsylvania, and medical director at the [Charles O'Brien Center for Addiction Treatment](#). "Based on the study's results, this drug, plus cognitive behavioral therapy, may be a good option for people addicted to both alcohol and cocaine to help reduce their cocaine use."

Topiramate is an anticonvulsant drug that increases the brain levels of GABA, or gamma-Aminobutyric acid, which is a primary inhibitory neurotransmitter in the central nervous system. It is FDA approved for the treatment of [epilepsy](#), migraines and more recently for weight loss in combination with phentermine.

For drug and alcohol addiction, it is thought that the increase of GABA may reduce the dopamine release associated with cocaine and alcohol use and thus reduce the reinforcing euphoric effects of the two. A small pilot study in 2005 by Dr. Kampman and colleagues found that topiramate helped cocaine addicts stay off the drug for three weeks or more.

Given prior studies, it's puzzling that topiramate did not reduce alcohol dependence, but could be explained by the severity of the group's addiction to it, the authors write. The percent days of heavy drinking for participants in this trial were much lower than past studies (12 percent vs 48 percent in some cases). Topiramate may have a greater effect in those who drink more heavily.

The double-blind, placebo-controlled trial included addicts whose average age was 45 and were mainly African American males who smoked crack cocaine. There was no significant difference, with respect to demographics, drug and alcohol use and amount of money spent on substances, between the two groups. Drug and alcohol tests were

performed three times a week.

During the last three weeks of the trial, 20 percent of users on topiramate abstained from cocaine, compared to just 7 percent on the placebo. Heavy users also had significantly more negative cocaine drug tests during the trial compared to placebo-treated subjects (17.6 percent vs. 8.8 percent.) The drug likely had a more positive impact on heavy user users because they experience higher levels of cocaine euphoria, said Dr. Kampman.

Sixty-five percent of participants on topiramate stayed in the trial, while 59 percent of subjects on the placebo stayed—a statistically significant difference.

"This study further supports topiramate as a promising medication for people who are both [alcohol](#) and cocaine dependent," said Dr. Kampman. "Future studies are planned in which topiramate will be combined with other promising medications for the treatment of [cocaine dependence](#) in the hope of achieving even higher levels of [cocaine](#) abstinence than were achieved with topiramate alone."

**More information:** [www.ncbi.nlm.nih.gov/pubmed/23810644](http://www.ncbi.nlm.nih.gov/pubmed/23810644)

Provided by University of Pennsylvania School of Medicine

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