

# Alcohol consumption may increase amphetamine abuse

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Stimulant drugs, which can increase energy and concentration, are widely abused by young adults. One such drug are amphetamines, which in addition to being widely accessible, has been shown in previous studies to have a significant relationship between its abuse and the amount of alcohol consumed.

The results will be published in the March 2011 issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

Craig R. Rush, senior author of the study and Professor of Behavioral Science, Psychiatry and Psychology at the University of Kentucky, said that there is a direct epidemiological link between drinking [alcohol](#) and the misuse of prescription drugs. Rush and his fellow researchers wanted to build upon previous research that showed that [moderate drinkers](#) were more sensitive to some of the effects of [amphetamines](#) when compared to light drinkers.

"The idea behind the present study was to follow that study up with one in which we determined whether moderate drinkers were also more likely to work to receive amphetamine in the laboratory, in addition to being more sensitive to its subjective effects," said Rush.

The researchers assessed 33 individuals, and divided them into either moderate or light drinkers, based on if they drank more or less than seven drinks per week, respectively. During the course of four studies,

the participants were given the placebo, as well as both low (8-10mg) and high (16-20mg) doses of d-amphetamine. Following these initial sessions, the subjects then had the chance to earn up to a total of eight capsules containing 12.5 per cent of the previous dose by working on a computer task.

The results showed that the high dose of amphetamines increased drug taking in both light and moderate drinkers, while only the low dose did so with the moderate drinkers. The moderate drinkers were found to engage in the computer tasks in order to receive the high dose of amphetamine. This indicates that consuming moderate levels of [alcohol](#) may increase an individual's vulnerability to the effects of stimulants like amphetamine. But, further research is needed to fully explain the behavioral and neuropharmacological mechanisms involved between alcohol consumption and stimulant abuse.

However, one possible explanation the researchers discussed was that the moderate drinking group might have been sensitized to the reinforcing effects of the amphetamines because of increased drug use.

"Sensitization effects to stimulants can be powerful, most notably with regard to their persistence," said Mark T. Fillmore, a professor of psychology at the University of Kentucky. "We need to determine if drinking heavily might actually produce physiological changes in individuals that causes them to become more sensitive to the pleasurable effects of psychostimulant drugs, such as amphetamines."

Rush agrees, but says that there are many different paths of research that can branch off of this.

"Other future directions could be to look at the influence of alcohol use history on the effects of other drugs of abuse or to determine how acute alcohol administration, as opposed to self-reported drinking history,

impacts response to stimulants."

Provided by Alcoholism: Clinical & Experimental Research

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