

Binge drinking doesn't affect next-day student test-taking

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In a first-of-its kind controlled experiment, researchers from the Boston University School of Public Health (BUSPH) and Brown University have found that surprisingly, binge drinking the night before a test does not impact college students' test performance - although it can affect their moods, attention and reaction times.

The study, which appears in the April 2010 edition of the journal *Addiction*, was conducted by Jonathan Howland, professor of community health sciences at BUSPH, and Damaris Rohsenow, research professor at Brown's Center for Alcohol and Addiction Studies.

The study found that intoxication in the evening did not affect students' next day scores on academic tests requiring [long-term memory](#), or on tests of recently learned material. Binge drinking did, however, slow participants' attention/reaction times and worsen mood states - impacts that could affect safety-related behaviors, such as driving.

Howland said the research team was surprised by the test-taking results because some prior studies have found that occupational performance was impaired the day after intoxication. But, he explained, "We looked at one particular academic outcome. Test-taking is only one measure of academic success."

The researchers also noted that [binge drinking](#) could affect other types of academic performance, such as essay-writing and problem-solving requiring higher-order cognitive skills.

"We do not conclude... that [excessive drinking](#) is not a risk factor for academic problems," the researchers wrote. "It is possible that a higher alcohol dose would have affected next-day academic test scores. Moreover, test-taking is only one factor in academic success. Study habits, motivation and class attendance also contribute to academic performance; each of these could be affected by intoxication."

While some previous studies, using surveys, have found that students who drink heavily have more academic difficulties than their peers who drink more moderately, this is the first study to examine that association by enrolling students in a controlled experiment, Howland said.

He said the study raises interesting questions about the effects of alcohol on specific cognitive skills and reaction/attention behavior - questions that warrant further investigation.

The team of researchers tested 193 university students, ages 21 to 24, recruited from the Boston area. Over the course of four days - one evening and the next morning, and then a second evening and morning a week later - volunteer participants received either beer or nonalcoholic beer. They received the opposite drink the second time they were tested.

The morning after, participants were given the practice versions of the Graduate Record Exam (GRE), as well as a mock quiz on an academic lecture they received the previous afternoon. Students were monitored overnight by an emergency medical technician.

The study found that participants scored no differently on the GREs, or on the quizzes, whether they had consumed alcoholic or non-alcoholic beer. Howland noted that the scores on the GRE and quizzes were relatively high, showing that the [students](#) were taking the tests seriously. The researchers used different versions of the GREs, and quizzes on different lectures, that were comparable in difficulty.

More information: The full study is available at:
[www3.interscience.wiley.com/cgi ... /123317541/HTMLSTART](http://www3.interscience.wiley.com/cgi-bin/jpages/123317541/HTMLSTART)

Provided by Boston University Medical Center

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