

Study finds drunken people aware of poor decisions

January 3 2012, By Harry Jackson Jr.

A new study says that people who commit blunders while under the influence of alcohol know they're doing it; they just don't care.

This means buzzed or drunken people who engage in embarrassing or harmful behavior can't blame it on not having control, said researcher Bruce Bartholow, associate professor of psychology at the University of Missouri-Columbia.

While this isn't the first study that shows alcohol alters the behavior of those who consume it, "it's the first to show they don't care that they're making mistakes," said Bartholow, chief researcher on the study.

Brain tests during the study of 67 people in Columbia, Mo., showed that alcohol dulls a mechanism in the brain that tells an individual to put on the brakes when they realize they're making mistakes.

When the mechanism is working, "They slow down and try not to make the mistake again, or they take corrective action," Bartholow said.

Introduce alcohol and someone is more likely to disregard the moral stop sign, he said, even though they know what they're doing.

The study involved people between the ages of 21 and 35, students and nonstudents.

-Researchers gave a third of the participants drinks with enough alcohol

to raise their [blood levels](#) to just under the legal driving limit of .08 percent, Bartholow said. They all got the same amount so researchers didn't measure if the effect was gradual.

-Researchers gave a third of the participants [placebo](#) drinks; they didn't know if the drinks contained alcohol.

-A third consumed drinks they knew contained no alcohol.

Then, the groups were given tasks designed to elicit mistakes. Researchers measured changes in participants' mood, their accuracy in computer tasks and how they perceived their accuracy in the tasks.

Bartholow said the researchers used devices on the participants to measure [brain activity](#) as the subjects took the tests. Medical technology exists to measure brain activity for impulse control, emotion, mood and other functions.

Nondrinkers had normal activity in the part of the brain that regulated recognizing mistakes. Drinkers had less activity, he said.

Nondrinkers who made mistakes slowed down and tried to correct the errors, he said. Drinkers made less of an effort or simply moved past their errors, the researcher said, even though they knew they'd made errors.

Researchers also interviewed participants after the tests, which helped affirm the findings in the computer tests, he said.

The dulling of the brain's mistake alarm only occurred among people who had alcoholic beverages, he said.

"Normally, someone who makes mistakes is aware and makes an effort

not to make that mistake again," Bartholow said. The people in the alcohol group were less likely, however, to slow down and be more careful, but they realized they had made errors.

"Using alcohol doesn't allow someone to escape culpability," he said.

Dr. Douglas Schuerer, a trauma surgeon with Barnes-Jewish Hospital, said the findings aren't a surprise. "This says that people should think before they drink," he said.

That advice goes beyond New Year's Eve and its tradition of drinking: "It's something that needs to be considered 365," he said.

Many of Schuerer's patients are people from the hospital's emergency room who need surgery.

"About 50 percent of patients we see from traffic accidents, alcohol was involved," he said. "That doesn't always mean they were drinking; sometimes they were hit by a drunk driver."

In addition, he said he sees more personal injury accidents involving people impaired by alcohol.

The findings have a flip side, Bartholow said. A small amount of alcohol may help people with anxiety disorders or those who are hypersensitive to making errors, Bartholow said.

But he warns that "consistently drinking as a way to reduce anxiety can lead to serious problems, including alcoholism."

Bartholow's study, "Alcohol Effects on Performance Monitoring and Adjustment: Affect Modulation and Impairment of Evaluative Cognitive Control," has been accepted for publication in an upcoming edition of

the Journal of Abnormal Psychology. The National Institute on [Alcohol Abuse and Alcoholism](#) and the University of Missouri Research Board paid for the study.

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