

Even a Little Alcohol Increases Risk of Injury

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Alcohol's burden on society is undisputed. The economic impact alone is staggering. According to the National Institute on Alcohol Abuse and Alcoholism, billions of dollars in earnings are lost each year due to alcoholism and alcohol-related incidents. Billions more are spent on medical costs and public services.

Despite all this information about the societal problems caused by alcohol, few studies have shown the impact of short-term exposure to the prevalent drug. New findings by a University of Missouri-Columbia (MU) researcher demonstrate that a person's risk of injury increases significantly after only two standard drinks, such as two 12-ounce beers. According to Dan Vinson, family-practice physician and professor of family and community medicine at MU, "This study shows that just two drinks during a six-hour period more than double the chances that a person will sustain some type of injury."

Vinson's research destroys popular myths about how much alcohol people safely can consume in a given time period. For example, three or four drinks consumed over a six-hour period—a quantity generally accepted as safe if the drinks are distributed at one or less per hour—multiplies the risk of injury by five. Five or six drinks in the same time period increase the risk of injury tenfold. Overall, the study provides strong evidence that short-term, acute exposure to alcohol poses a serious threat of injury.

"We're not talking about alcoholism in this study," said Vinson. "We're talking about common, ordinary behavior."

As predicted before and during the study, Vinson believes the findings provide important

data that could influence public policy. The study indicates that the typical person is impaired substantially before reaching a blood-alcohol content of 0.08, the current level for being considered drunk in Missouri [and most other states]. To illustrate this point, a 160-pound man who consumes four drinks in one hour would have a BAC of 0.08 at the end of that hour. A 135-pound woman who consumes three drinks in one hour also would have a BAC of 0.08 at the end of that hour.

The study used the case-crossover method, a relatively new study design developed by Malcolm Maclure, one of the co-investigators. The researchers compared patients' drinking consumption in the six hours before their injury with their drinking consumption in the same six-hour block of time the previous day. The researchers obtained their data from interviews with individuals who were treated for injuries in one of the three emergency rooms in Columbia, Mo. Researchers also compared the subjects to a community-control group and discovered very similar findings.

Vinson hopes his study will spark a public discussion about the implications of low to moderate levels of alcohol consumption. He says the information should help family-practice physicians answer the common question of how much alcohol can be consumed without endangering one's health. Vinson's study was published in the May 2003 issue of the *Journal of Studies on Alcohol*. ■

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