

Study: Alcohol provides protective effect, reduces mortality substantial

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Injured patients were less likely to die in the hospital if they had alcohol in their blood, according to a study from the University of Illinois at Chicago School of Public Health—and the more alcohol, the more likely they were to survive.

"This study is not encouraging people to drink," cautions UIC injury epidemiologist Lee Friedman, author of the study, which will be published in the December issue of the journal *Alcohol* and is now online.

That's because [alcohol intoxication](#)—even minor inebriation—is associated with an increased risk of being injured, he says.

"However, after an injury, if you are intoxicated there seems to be a pretty substantial protective effect," said Friedman, who is assistant professor of environmental and occupational health sciences at UIC.

"The more alcohol you have in your system, the more the protective effect."

Friedman analyzed Illinois Trauma Registry data for 190,612 patients treated at [trauma centers](#) between 1995 and 2009 who were tested for [blood alcohol content](#), which ranged from zero to 0.5 percent at the time they were admitted to the trauma unit.

Of that group, 6,733 died in the hospital.

The study examined the relationship of alcohol dosage to in-hospital mortality following [traumatic injuries](#) such as fractures, internal injuries and open wounds. Alcohol benefited patients across the range of injuries, with burns as the only exception.

The benefit extended from the lowest blood alcohol concentration (below 0.1 percent) through the highest levels (up to 0.5 percent).

"At the higher levels of blood alcohol concentration, there was a reduction of almost 50 percent in [hospital mortality rates](#)," Friedman said. "This protective benefit persists even after taking into account [injury severity](#) and other factors known to be strongly associated with mortality following an injury."

Very few studies have looked at the [physiological mechanisms](#) related to alcohol and injury in humans. Some animal studies have shown a neuro-protective effect from alcohol, but the findings of most animal and previous human studies often contradict one another because of different study criteria.

Friedman says it's important for clinicians to recognize intoxicated patients but also to understand how alcohol might affect the course of treatment. Further research into the biomechanism of the protective phenomenon is needed, he said.

If the mechanism behind the protective effect were understood, "we could then treat patients post-injury, either in the field or when they arrive at the hospital, with drugs that mimic alcohol," he said.

Provided by University of Illinois at Chicago

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