

# New research shows weekend binge drinking could leave lasting liver damage

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Long after a hangover, a night of bad decisions might take a bigger toll on the body than previously understood. Described in the current issue of [\*Alcoholism: Clinical & Experimental Research\*](#), a study at the University of Missouri has revealed a unique connection between binge drinking and the risk for developing alcoholic liver disease and a variety of other health problems.

"In our research, we found that [binge drinking](#) has a profound effect on the [liver](#) in various modes of alcohol exposure," said Shivendra Shukla, PhD, Margaret Proctor Mulligan Professor at the University of Missouri School of Medicine and corresponding author of the study. "No longer can we consider chronic [alcohol consumption](#) as the only factor in developing alcoholic liver disease."

Shukla said it's important to note there will be more liver injury in a chronic alcoholic if that person binge drinks, but a binge drinker may sensitize the liver over a longer period and make it prone to more damage. MU researchers studied the effects of binge drinking when coupled with chronic alcohol consumption and also in isolated cases of binge drinking not associated with chronic alcohol consumption.

Nationwide and in Missouri, binge drinking is on the rise. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines binge drinking for women as having four or more drinks in two hours; for men, it is five or more drinks in two hours. An estimated 29 percent of women and 43 percent of men have reported experiencing at least one

binge drinking episode over the course of a year.

Through their study of alcohol exposure in rats, researchers in Shukla's lab found binge drinking amplifies injury to the liver when there was pre-exposure due to chronic [alcohol](#) consumption. As the main metabolic site for the body, the liver affects many systems in the body, including nutrient and drug metabolism and distribution, as well as the production of multiple agents that are needed for the heart, kidney, blood vessels and brain to function properly.

"Binge drinking should not be associated with only liver damage," said Shukla, a professor of medical pharmacology and physiology. "It creates an inflammatory response in the liver that is like a cluster bomb, sending out various damaging signals to systems in the body. If those organs are working at a lower level of function, then a whole host of physiological processes is affected."

Provided by University of Missouri School of Medicine

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