

What Science Tells Us About Impaired Driving Behavior And Consequences Among U.S. College Students

Alcohol-Impaired Driving

Alcohol problems among U.S. college students that make headlines and grab the public's attention are those that involve heavy drinking, which sometimes leads to alcohol poisoning, trips to emergency rooms, and even death. Fortunately, such events are, in fact, rare, except when driving is also involved. Deaths and injuries from alcohol-related traffic crashes are not rare. In [2005](#), of all the 1,825 estimated alcohol-related injury deaths of college students 1,357 were due to drinking and driving.

Drinking and driving is a relatively common behavior among college students. According to a [Harvard School of Public Health College Alcohol Study \(CAS\) report](#), about 30 percent of students drove under the influence of alcohol and 23 percent rode with a driver who was drunk or high. But it turns out that students are not all alike when it comes to drinking and driving. For example, a higher percentage of men, white students, and members of Greek organizations than other categories of college students drove after drinking and rode with a driver who was high or drunk. The percentage of students aged 21 to 23 who drove after drinking any alcohol and after having five or more drinks (often referred to as binge drinking) was higher than the percentage of students under the legal drinking age who did so. Although a higher percentage of students aged 24 and up drove after drinking any alcohol than those under the legal drinking age, no differences between these groups

existed in reports of driving after consuming five or more drinks. A smaller proportion of students older than age 24, compared with their younger peers, rode with an intoxicated driver.

The characteristics of colleges also influence student drinking and driving behavior. The CAS found that students at certain colleges were more likely to drink and drive. Students at large campuses reported higher rates of driving after consuming any alcohol, but at lower rates at schools in the Northeast. Students at medium-sized, public, and Southern and North-Central schools more often reported driving after consuming five or more drinks. Rates of riding with a high or drunk driver were higher among students attending public and Southern and North-Central schools, but lower among students attending commuter and competitive (i.e., where the ratio of applicants to admitted students is lower) schools. And both these drinking and driving behaviors occurred at a higher rate at schools with high rates of binge drinking.

In addition, living arrangements influenced drinking and driving behavior. A smaller percentage of students who lived in dormitories reported drinking and driving and riding with a high or drunk driver than students who lived in Greek houses. The lowest rates of drinking and driving occurred among residents of substance-free residence halls. Among off-campus residents, those who lived with parents had lower rates of drinking and driving than those who lived alone or with a roommate.

Drug-Impaired Driving

Less research has been conducted on drug-impaired driving among U.S. college students, but according to the National Highway Traffic [Safety Administration](#) (NHTSA), recently "more attention has been given to drugs other than alcohol that have increasingly been recognized as hazards to road traffic safety. . . . Overall, marijuana is the most prevalent illegal drug detected in impaired drivers,

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fatally injured drivers, and motor vehicle crash victims.”

According to the latest National Roadside Survey conducted by NHTSA, more than 16 percent of weekend nighttime drivers tested positive for drugs. However, NHTSA cautions readers that “drug presence does not necessarily imply impairment. For many drug types, drug presence can be detected long after any impairment that might affect driving has passed. For example, traces of marijuana can be detected in blood samples several weeks after chronic users stop ingestion. Also, whereas the impairment effects for various concentration levels of alcohol is [sic] well understood, little evidence is available to link concentrations of other drug types to driver performance.”

The [2008 National Survey on Drug Use and Health](#) found that “In 2008, 10.0 million persons aged 12 or older reported driving under the influence of illicit drugs during the past year. This corresponds to 4.0 percent of the population aged 12 or older, the same as the rate in 2007 (4.0 percent), but lower than the rate in 2002 (4.7 percent). In 2008, the rate was highest among young adults aged 18 to 25 (12.3 percent).”

The 2010 Obama Administration National Drug Control Strategy has established preventing drugged driving as a priority. It calls for greater efforts on the part of federal agencies to collect more information on drugged driving and encourages states to adopt, among other regulatory legislative measures, laws clarifying that the presence of any illegal drug in a driver’s body is *per se* evidence of impaired driving.

Prevention Initiatives

Despite the seriousness and magnitude of drinking and drugged driving by students, prevention efforts aimed at reducing these behaviors *per se* are not a focus on many campuses, which have programs aimed at reducing alcohol and other drug abuse generally but not specifically at drinking and

drugged driving. Those campuses that support drinking and driving prevention have a tendency to focus on transportation issues by providing “safe rides” for drinkers and passengers who would otherwise be driving under the influence or riding with an impaired driver. Those programs provide safe transportation for free or at a reduced rate. For example, since 1999, [CARPOOL](#), a student-run safe ride program at Texas A&M University, provides “free, safe, and fun nonjudgmental rides” to the Bryan/College Station community during the hours of 10 p.m. to 3 a.m. on Thursday, Friday, and Saturday nights during the spring and fall semesters. Some campuses provide free van service to and from campus and entertainment districts. Associated Students at the University of California-San Diego (UCSD) operates [A.S. Safe Rides](#) through a shuttle service to provide UCSD undergraduates with free transportation from 11 p.m. to 3 a.m. on Tuesday, Thursday, Friday, and Saturday nights during the academic year.

Designated driver (DD) programs, which have been around for more than two decades, are another popular approach for preventing drinking and driving. DD programs can be education and awareness efforts at colleges or in communities that encourage people to identify a designated driver before they go out to a party or bar. They can also be promoted by bars and taverns, which may offer price discounts on nonalcoholic beverages for the designated driver. For the most part, these programs work best when drinkers are part of a group, with one member of the group agreeing not to drink and to be the sober driver, but it doesn’t always work that way. A 2003 study of designated drivers among college students in Virginia found that although the mean blood alcohol concentration (BAC) of the designated drivers was below the legal limit of intoxication in Virginia, which is .08 percent, they had not abstained from drinking alcohol and had a mean BAC of .06 percent, which is above the .05

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percent BAC limit at which psychomotor impairment begins.

The researchers also found that the mean BAC of both male and female passengers was above the legal limit for driving, regardless of whether they were using a designated driver. “This is alarming, particularly for the participants who did not have a sober DD. This finding shows a severe problem of alcohol consumption in a university community and indicates that the DD approach is clearly not a quick-fix solution,” the researchers wrote.

In the early 2000s, researchers at San Diego State University conducted an environmental driving under the influence (DUI) prevention trial that used a media campaign touting increased enforcement coupled with DUI checkpoints and roving DUI patrols. The study found a significant reduction in DUI at the experimental campus compared with no change at the control campus.

Policy as Prevention

While not necessarily directed specifically at college students, a number of public policies have been very successful in reducing DUI among youths and young adults. NHTSA says, “Perhaps no alcohol safety measure has attracted more research and public attention or shown more consistent evidence of effectiveness than the minimum legal drinking age (MLDA) 21 law in the United States” (*An Examination of the Criticisms of the Minimum Legal Drinking Age 21 Laws in the United States from a Traffic-Safety Perspective*, October 2008).

NHTSA estimates that minimum drinking age laws have saved 26,333 lives since 1975. This estimate represents people of all ages who otherwise would have been involved in a fatal crash with 18- to 20-year-old alcohol-impaired drivers.

The CAS researchers found that other policies had an effect on drinking and driving by college students. “The underage laws considered were: prohibitions against using a false identification,

restrictions on attempting to buy or consume for those under the legal drinking age, minimum age to be a clerk, minimum age of 21 years to sell alcohol (local), minimum age of 21 years to sell alcohol (state), and mandatory postings of warning signs to potential underage buyers for retailers.”

Laws that pertained to the minimum legal drinking age were examined for underage students only. Laws pertaining to volume alcohol sales were: keg registration; a statewide .08 percent BAC law; and restrictions on happy hours, open alcohol containers, beer sold in a pitcher, and billboards and advertising. The researchers also added a rating of law enforcement—a measure designed to reflect state-level investments in resources for law enforcement agencies, including the equipment and personnel necessary for effective enforcement efforts—to their consideration of the set of laws enacted in each state and community.

The researchers found that students who attended colleges in states that had more restrictions on underage drinking, high-volume consumption, and sales of alcoholic beverages and that devoted more resources to enforcing drunk driving laws, reported less drinking and driving. For example, at 8.2 percent, the rates of drinking five or more alcoholic beverages and driving were significantly lower among underage students who attended college in states that had a majority of control laws (four of seven laws) pertaining to underage drinking, compared with 11.6 percent reporting driving after drinking five or more alcoholic beverages in states with fewer than four alcohol control laws. The researchers concluded: “The occurrence of drinking and driving among college students differs significantly according to the policy environment at local and state levels and the enforcement of those policies. Comprehensive policies and their strong enforcement are promising interventions to reduce drinking and driving among college students.”