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DRUGGED DRIVING

What is Drugged Driving?

"Have one [drink] for the road" was, until recently, a commonly used phrase in American culture. It has only been within the past 20 years that as a Nation, we have begun to recognize the dangers associated with drunk driving. Through a multipronged and concerted effort involving many stakeholders, including educators, media, legislators, law enforcement, and community organizations, such as Mothers Against Drunk Driving (MADD), the Nation has seen a decline in the numbers of people killed or injured due to drunk driving. It is now time that we recognize and address the similar dangers that can occur with drugged driving.

In 12 states (Arizona, Georgia, Indiana, Illinois, Iowa, Michigan, Minnesota, Nevada, Pennsylvania, Rhode Island, Utah, and Wisconsin), it is illegal to operate a motor vehicle with any detectable level of a prohibited drug, or its metabolites, in the driver's blood. Other state laws define "drugged driving" as driving when a drug "renders the driver incapable of driving safely," or "causes the driver to be impaired."

In reality, the principal concern regarding drugged driving is that driving under the influence of any drug that acts on the brain could impair one's motor skills, reaction time, and judgment. Drugged driving is a public health concern because it puts not only the driver at risk, but passengers and others who share the road.

How Many People Take Drugs and Drive?

The National Highway Traffic Safety Administration (NHTSA) reports that 16,000 people are killed annually due to drunk and drugged driving. Furthermore, NHTSA estimates that drugs are used by approximately 10 to 22 percent of drivers involved in crashes, often in combination with alcohol.[1] According to the 2003 National Survey on Drug Use and Health,[2] an estimated 10.9 million people reported driving under the influence of an illicit drug during the year prior to being surveyed. This corresponds to 4.8 percent of the population aged 15 or older, but 14.1 percent among young adults aged 18 to 25. In addition:

- Younger adult drivers were more likely to have driven under the influence of alcohol or illicit drugs than older adult drivers, with more than one in three drivers aged 21 to 25 (33.8 percent) and nearly one in four drivers aged 26 to 34 (24.3 percent) having driven under the influence of drugs or alcohol during the previous year. These percentages go down further in drivers over age 35.
- Male drivers were nearly twice as likely as female drivers to have driven under the influence of alcohol or drugs during the previous year (22 percent compared with 11.4 percent).[2]

In recent years, drugs that act on the brain other than alcohol have increasingly been recognized as hazards to road traffic safety. Research examining these drugs indicates that marijuana is the most prevalent illegal drug detected in impaired drivers, fatally injured drivers, and motor vehicle crash victims.[3] A variety of other drugs, such as benzodiazepines, cocaine, opiates, and amphetamines, have also been reported in fatal and nonfatal motor vehicle crashes.

A number of studies have examined illicit drug use in drivers involved in motor vehicle crashes, reckless driving, or in fatal accidents. For example:

- A recent study found that 34 percent of drivers admitted to a Maryland trauma center tested positive for drugs only, while 16 percent tested positive for alcohol only; 50 percent of those under 18 tested positive for alcohol and/or drugs.[4] While it is interesting that more people in this study tested positive for drugs-only compared to alcohol-only, it should be noted that this represents one geographic location, so findings cannot be generalized. In fact, many studies among similar populations have found higher prevalence rates of alcohol compared with drug use.[5]
- In one study of 168 fatally injured truck drivers in 8 states, 33 percent tested positive for psychoactive drugs or alcohol.[6]
- Studies conducted in a number of localities have found that approximately 4 to 14 percent of drivers who sustained injury or death in traffic accidents tested positive for delta-9-tetrahydrocannabinol (THC), the active ingredient in marijuana.[7]
- In a large study of almost 3,400 fatally injured drivers from 3 Australian states (Victoria, New South Wales, and Western Australia) between 1990 and 1999, drugs other than alcohol were present in 26.7 percent of the cases.[8] These included cannabis (13.5 percent), opioids (4.9 percent), stimulants (4.1 percent), benzodiazepines (4.1 percent), and other psychotropic drugs (2.7 percent). Almost 10 percent of the cases involved both alcohol and drugs.

Teens and Drugged Driving

- According to NHTSA, vehicle accidents are the leading cause of death among those aged 15 to 20.[9] It is generally accepted that because teens are the least experienced drivers as a group, they have a higher risk of being involved in an accident compared with more experienced drivers. When this lack of experience is combined with the use of marijuana or other substances that impact cognitive and motor abilities, the results can be tragic.
- NIDA's Monitoring the Future survey indicated that in 2004, 12.7 percent of high school seniors reported driving under the influence of marijuana, and 13.2 percent reported driving under the influence of alcohol in the two weeks prior to completing the survey.[10]
- The State of Maryland's Adolescent Survey indicates that 26.8 percent of the State's licensed, 12th-grade drivers reported driving under the influence of marijuana during 2001.[11]

Why is Drugged Driving Hazardous?

Drugs act on the brain and can alter perception, cognition, attention, balance, coordination, and other faculties required for safe driving. The effects of specific drugs of abuse differ depending on their mechanisms of action, the amount consumed, the history of the user, and other factors.

Marijuana

THC affects areas of the brain that control the body's movements, balance, coordination, memory, and judgment abilities, as well as sensations. Because these effects are multifaceted, more research is required to understand marijuana's impact on the ability of drivers to react to complex and unpredictable situations. However, we do know that:

- A meta-analysis of approximately 60 experimental studies, including laboratory, driving simulator, and on-road experiments, found that behavioral and cognitive skills related to driving performance were impaired in a dose-dependent fashion with increasing THC blood levels.[12]
- Evidence from both real and simulated driving studies indicates that marijuana can negatively impact a driver's attentiveness, perception of time and speed, and the ability to draw on information obtained through past experiences.
- Research shows that impairment increases significantly when marijuana use is combined with alcohol.[13]
- Studies have found that many drivers who test positive for alcohol also test positive for THC, making it clear that drinking and drugged driving are often linked behaviors.[14]

Other Drugs

- Prescription drugs: Many medications (e.g., benzodiazepines and opiate analgesics) act on systems in the brain that could impair driving ability. In fact, many prescription drugs come with warnings against the operation of machinery—including vehicles—for a specified period of time after use. When prescription drugs are taken *without* medical supervision (i.e., when abused), impaired driving and other harmful reactions can also result.

In short, drugged driving is a dangerous activity that puts us all at risk.

[1] National Highway Traffic Safety Administration. *Drugs and Human Performance Fact Sheet.* U.S. Department of Transportation Report No. DOT HS 809 725, Washington, DC, 2004.

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[3] Soderstrom CA, Dischinger PC, Kerns TJ, Kufera JA, Scalea TM. Epidemic Increases in Cocaine and Opiate Use by Trauma Center Patients: Documentation with a Large Clinical Toxicology Database. *J Trauma* 51:557–564, 2001.

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[8] Drummer OH, Gerostamoulos J, Batziris H, Chu M, Caplehorn JR, Robertson MD, Swann P. The Incidence of Drugs in Drivers Killed in Australian Road Traffic Crashes, *Forensic Sci Int* 134:154–162, 2003.

[9] Op. cit. ref. 1.

[10] National Institute on Drug Abuse (NIDA) Web site, http://www.drugabuse.gov/DrugPages/mtf.html. Monitoring the Future is funded by NIDA and conducted by the University of Michigan's Institute for Social Research. These findings are from the 2004 survey.

[11] Maryland Adolescent Survey, Conducted by the State Dept. of Education, http://www.msde.state.md.us/pdf_files/Final%202002%20MAS%20Report.pdf, 2002.

[12] Berghaus G, Sheer N, Schmidt P. "Effects of Cannabis on Psychomotor Skills and Driving Performance–A Meta-Analysis of Experimental Studies." In: Proceedings–13th International Conference on Alcohol, Drugs and Traffic Safety. Eds. CN Kloeden, AJ McLean, NHMRC Road Accident Research Unit, The University of Adelaide, Adelaide, Australia, pp. 403–409, 1995.

[13] National Highway Traffic Safety Administration. Marijuana and alcohol combined severely impede driving performance. *Ann Emer Med* 35(4):398–399, 2000.

[14] Op. cit. ref. 8.

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