Drug Impaired Driving: An Emerging Trend

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

NHTSA Releases Two New Studies On Impaired Driving On U.S. Road

National Roadside Survey of Alcohol and Drug Use by Drivers

About the findings

- **Drinking and driving is falling**
  - The proportion of drivers with measurable alcohol levels declined by about 30 percent from 2007 to 2014. This decline was seen across all alcohol levels. Since the first such survey in 1973, the prevalence of alcohol among drivers has declined by nearly 80 percent.
  - In 2014, about 1.5 percent of weekend nighttime drivers had .08 or higher breath alcohol concentrations (BrACs).
  - About 8.3 percent of drivers had some measurable alcohol in their systems.
- **Drugged driving is rising**
  - About 20.0 percent of drivers tested positive for at least one drug in 2014, up from 16.3 percent in 2007.
  - Some 12.6 percent of drivers had evidence of marijuana use in their systems, up from 8.6 percent in 2007.
  - More than 15 percent of drivers tested positive for at least one illegal drug, up from 12 percent in 2007.

NHTSA Drug and Alcohol Crash Risk Study

About the findings

- Drivers at a breath alcohol level of 0.08 percent, the legal limit in every state, were about four times more likely to crash than sober drivers.
- Drivers with an alcohol level of 0.15 percent were 12 times more likely to crash than sober drivers.
- Marijuana users were about 25 percent more likely to be involved in a crash than drivers with no evidence of marijuana use.
- Other factors – such as age and gender – appear to account for the increased crash risk among marijuana users.
- Ongoing research will refine our understanding of when marijuana use by drivers increases the risk of crashing.

DRUG IMPAIRED DRIVING: A GUIDE FOR WHAT STATES CAN DO

By the Governors Highway Safety Association (GHSA)
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Drug Impaired Driving: A Guide For What States Can Do

DRIVERS IN CRASHES

The best data come from fatal crashes because drivers in fatal crashes, especially fatally-injured drivers, are tested for drugs more frequently than drivers in non-fatal crashes. In 2013 nationwide, 62.6% of the fatally-injured drivers were tested for drugs. Of those tested, no drugs were detected in 57.3%, a drug in the FARS list was found in 30.3%, some other drug in 7.7%, and test results were unknown for 4.6%. Over one-third – 34.7% – of the identified drugs were marijuana in some form, followed by amphetamine at 9.7% (FARS, 2015).

Alcohol was present at similar levels. In 2013, 74.3% of the fatally-injured drivers were tested for alcohol. No alcohol was detected in 57.6% of those tested, alcohol at a positive BAC in 38.4%, and test results were unknown for 3.9%. (FARS, 2015).

Fatally-injured drivers in Canada had similar drug and alcohol levels. In 2010, 34.2% were positive for drugs and 39.1% for alcohol, with marijuana present in 36.9% of the drug-positive drivers (Beirness, 2014b).

Only 31.2% of surviving drivers were tested for drugs in 2013. They had somewhat lower drug levels: no drugs in 56.0% of those tested, a drug in the FARS list in 23.4%, some other drug in 5.5%, and unknown test results for 15.2%. For surviving drivers, 30.4% of the identified drugs were marijuana. (FARS, 2015).

Alcohol was tested in 31.2% of the surviving drivers in 2013. No alcohol was detected in 67.2%, alcohol at a positive BAC in 24.1%, and test results were unknown for 8.7%. (FARS, 2015).

DRIVERS ARRESTED FOR DUI

A recent study provides the best available data (Logan et al., 2014). Of 92 drivers arrested for DUI in the Miami area, 41% tested positive for some drug. Fifty-one of

these drivers had a BAC of 0.08 or above and 39% of them also tested positive for a drug

ROADSIDE SURVEYS

In 2013-14, NHTSA conducted a roadside survey of drivers during weekday days and weekend nights (Berning et al., 2015). In each time period, 22% of the drivers tested positive for some drug or medication. Illegal drugs, including marijuana, were somewhat more prevalent on weekend nights (15.2%) than weekday days (12.1%). Medication prevalence was the opposite, with 7.3% on weekend nights and 10.3% on weekday days. Marijuana was by far the most prevalent drug, with 12.6% of drivers testing positive on weekend nights. Alcohol presence was considerably lower: 8.3% of the weekend night drivers had a positive BAC level (.005 BAC or above) with 1.5% at a BAC of 0.08 or above. On weekday days, only 1.1% had a positive BAC and 0.4% a BAC of 0.08 or above.

A 2012 Canadian roadside survey reported lower drug levels: 7.4% positive for any drug, of which 3.3% were positive for marijuana; 6.5% had a positive BAC (Beirness, 2014b). Drug types varied considerably by age, with marijuana the most common drug by far among teenage drivers, depressants and narcotics among the oldest drivers, while marijuana, depressants, stimulants, and narcotics were present in similar levels among middle-aged drivers.

In a 2014 roadside survey in Washington conducted primarily in evening hours, 44% of the drivers reported that they had driven within two hours of using marijuana in the past year (PIRE, 2014).

Measured in national data, drug use has increased in recent years. In FARS, drugs were detected in 27.8% of fatally-injured drivers with known test results in 2005, 32.8% in 2009, and 39.9% in 2013 (NHTSA, 2010; FARS, 2015).

The proportion of drivers testing positive for prescription drugs has increased (Rudisill et al., 2014; Wilson et al., 2014).

In NHTSA’s roadside surveys, illegal drugs, including marijuana, increased from 12.4% in 2007 to 15.1% in 2013-14 and medications from 3.9% to 4.9% after adjusting the 2013-14 data to the same set of drugs and cutoff levels used in 2007 (Berning et al., 2015).

Washington voters approved recreational marijuana use in November 2012. The proportion of suspected impaired driving cases that tested positive for marijuana (THC) averaged 19.1% from 2009-2012, then rose to 24.9% in 2013 (Couper and Peterson, 2014) and to 28.0% in 2014 and 33% in preliminary data from the first four months of 2015 (Couper, 2015).

CONCLUSIONS ON DRUG PRESENCE IN DRIVERS

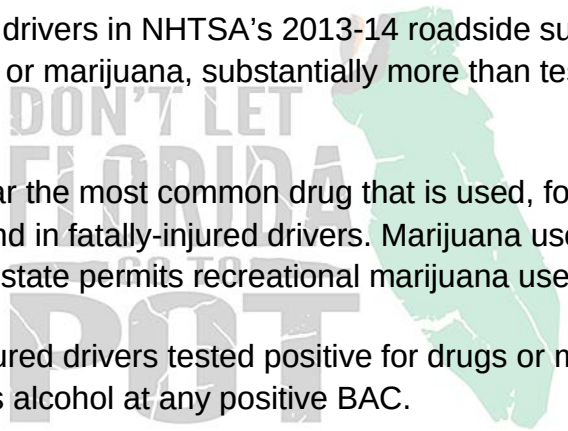
Given the uncertainties in defining and measuring drug use, these conclusions are stated fairly generally.

- About 20% of young adults aged 18-25 and about 6% of adults aged 26 and above use illegal drugs or marijuana at least monthly. In comparison, over 50% of each age group drink alcohol at least monthly.

- About 12-15% of drivers in NHTSA's 2013-14 roadside survey tested positive for some illegal drug or marijuana, substantially more than tested positive for alcohol.

- Marijuana is by far the most common drug that is used, found in roadside surveys, and found in fatally-injured drivers. Marijuana use by drivers likely increases after a state permits recreational marijuana use.

- 40% of fatally-injured drivers tested positive for drugs or marijuana in 2013, about the same level as alcohol at any positive BAC.



THE EFFECT OF MARIJUANA ON DRIVING

In experimental settings, marijuana impairs psychomotor skills and cognitive functions associated with driving, including vigilance, time and distance perception, lane tracking, motor coordination, divided attention tasks, and reaction time (Compton and Berning, 2015; Hartman and Huestis, 2013; Kelly-Baker, 2014).

Drivers may attempt to compensate by driving more slowly and increasing their following distance (Hartman and Huestis, 2013).

DRUGS AND CRASH RISK CONCLUSIONS

Given the many issues involved in studying the crash risk of drugs, particularly the need to control for other factors that affect crash risk and to account for the fact that most crash data record only drug presence rather than drug concentrations, the most defensible overall conclusions are:

- Any drug may increase a driver's crash risk.
- The effect of any drug varies substantially between drivers.
- The effect of any drug increases as its concentration increases.
- Most illegal drugs and marijuana may at least double a driver's crash risk.
- Some individual drugs, multiple drugs, and drugs combined with alcohol increase crash risk substantially.

WHAT DO DRIVERS THINK ABOUT DRUG EFFECTS ON DRIVING?
DRUGS AND CRASH RISK

Many drivers do not understand how various drugs can increase crash risk.

In surveys and focus groups with regular marijuana users in Colorado and Washington, almost all believed that marijuana doesn't impair their driving, and some believed that marijuana improves their driving (CDOT, 2014; PIRE, 2014; Hartman and Huestis, 2013).

Most regular marijuana users surveyed in Colorado and Washington drove "high" on a regular basis. They believed that they can compensate for any effects of marijuana, for instance by driving more slowly or by allowing greater headways. They believed it is safer to drive after using marijuana than after drinking alcohol. (CDOT, 2014; PIRE, 2014; Hartman and Huestis, 2013).

Many young drivers in Australia were not aware that drugs can impair driving. Many believed that drugged driving was safer than alcohol-impaired driving or that drugs improved their driving (Barrie et al., 2011). Young drivers in Canada had similar views: drugged driving is less risky and less easily detected than alcohol-impaired driving; in particular, marijuana use does not impair and may even improve their driving (Holmes et al., 2014).

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