

# Toxicology Bureau Fact Sheet: DRUG-IMPAIRED DRIVING



The Toxicology Bureau of the Scientific Laboratory Division performs toxicological investigations on a wide variety of criminal and forensic casework, including drug-impaired driving. This fact sheet provides basic information on drug-impaired driving for law enforcement, drug recognition experts and prosecutors.

This Fact Sheet will highlight some important issues concerning drug-impaired driving cases. These cases are more difficult to prosecute than alcohol-impaired driving, and require special attention.

## INTRODUCTION

The Toxicology Bureau of the New Mexico Department of Health Scientific Laboratory Division (SLD) will embark on a Drug-Impaired Driving outreach program starting in October 2001. With support from the Traffic Safety Bureau, SLD plans to develop and enhance a cooperative, comprehensive and multi-strategy program for the prevention, education, enforcement and successful prosecution of drug-impaired driving at the local, district and state levels. The proposed program would provide training to prosecutors, law enforcement and community groups.

Drug impaired driving is under-reported, often goes unrecognized and is more difficult to prosecute than alcohol impaired driving. Yet drug impaired driving is a constant factor in serious traffic crashes. A recent U.S. Department of Transportation (DOT) study conceded that the full impact of drugs on traffic safety is still unknown. A successful prosecution involves careful coordination of legal, law enforcement and scientific agencies. Unlike per-se laws governing alcohol use, drug-impaired driving is inherently more complex. The expert opinion of the toxicologist regarding driving impairment is often critical for prosecution. To render an opinion of impairment, the toxicologist may require key information from law enforcement personnel and prosecutors, such as signs and symptoms of drug use, behavioral observations and driving pattern.

## STATISTICS

According to the 1996 National Household Survey on Drug Abuse conducted by the Department of Health and Human Services (DHSS), 9 million people drove after drug use. A 1995 study conducted by the National Highway Traffic Safety Administration (NHTSA) and the U. S. Department of Transportation showed that drugs were used by 10 to 22% of drivers involved in crashes, often in combination with alcohol. In a 1990-1991 NHTSA study of 1,882 fatally injured drivers,

drugs other than alcohol were found in 17.8% of the cases. Studies of injured drivers taken for medical treatment have shown positive drug rates as high as 40%. Between 15 and 50% of drivers arrested for motor vehicle offenses tested positive for drugs. These national statistics, combined with the substance abuse problem in New Mexico, is a cause for concern and action. While it is understood that many illicit drugs impair driving skills, the driving deficits from prescription and over-the-counter drugs can also pose a significant risk.

## DRUG-IMPAIRED DRIVING AMONG YOUNG PEOPLE

The incidence of non-alcohol related driving impairment might be even greater in young adults. In one study funded by the DHSS, 23.5% of drivers under the age of 21 tested positive for drugs other than alcohol. Statistics from NHTSA and the Substance Abuse and Mental Health Services Administration (SAMHSA) have shown that driving after drug use was more common among young drivers. Persons aged between 16-20 were more than twice as likely to drive after using drugs (excluding alcohol) compared with those aged 21 or over. As many as 22% of young people reported using drugs prior to driving.

As many as 9 million people drove their vehicles after using drugs.

## FARS DATA

Data from the Fatal Accident Reporting System (FARS) in New Mexico indicated that of the 449 fatal crashes that were tested for drugs in 2000, as many as 19% were positive for drugs other than alcohol. Of these, the majority (12%) involved drugs alone (BAC<0.08%), with the remaining 7% involving both alcohol and drug use. A total of 8% of the fatal accidents involved multiple drug use, other than alcohol. These New Mexico statistics are in accordance with federal estimates obtained by NHTSA and the Department of Health and Human Services.

The complexity of drug-impaired driving is compounded by drug-alcohol or drug-drug interactions of additive, synergistic or antagonistic nature. These issues, together with individual differences, makes interpretation extremely challenging. In the absence of other information, it is very difficult to predict whether someone was impaired based on toxicology testing alone. As a result, individuals need to be able to recognize the signs and symptoms of drug-impaired driving. This requires a community-based program of awareness surrounding the dangers of drugs and driving and

preventive measures to keep New Mexico's roads safe for all drivers.

### DRUG EFFECTS

Drug effects can vary between individuals. The effects are influenced by history of drug use (chronic or naive user), tolerance, overall health, individual sensitivity to the drug, metabolism and other factors. Many drugs, especially those that affect the central nervous system, can impair driving. These include illicit drugs, as well as therapeutic and over-the-counter medications. Many therapeutic drugs that are available with or without a prescription, can have unwanted side effects that can impair driving performance.

**Illicit, therapeutic and over-the-counter drugs can impair driving performance.**

### EFFECTS OF DRUGS ON DRIVING

Drugs can impair several factors that are necessary for safe driving:

- **COORDINATION**  
Effects on nerves and muscles (hand-eye coordination). Needed for steering, braking, accelerating and manipulation of the vehicle.
- **REACTION TIME**  
Insufficient time for response (reaction or judgement).
- **JUDGEMENT**  
Cognitive effects, risk reduction, avoidance of potential hazards, emergency decision making, anticipation, risk-taking behavior, inattention, fatigue, decreased fear, exhilaration, loss of control.
- **TRACKING**  
Needed for staying in lane and maintaining distance.
- **ATTENTION**  
Driving requires divided attention, not focussed. It is a time-shared task with a high demand for information processing.
- **PERCEPTION**  
Information processing while driving is largely visual (glare resistance, recovery, dark and light adaptation, dynamic visual acuity).

### DRUG RECOGNITION

Drug recognition and documentation of signs and symptoms is especially important in drug-impaired driving cases. The first choice is Drug Recognition Expert (DRE) Certification. The DRE program was pioneered in California, by the Los Angeles Police Department in the 1980s. The program was formally validated by NHTSA in collaboration with Johns Hopkins University in 1985. The program provides specialized training in drug recognition that allows a trained officer to predict the class of drugs that may be present. The DRE plays a crucial role in drug-impaired driving prosecutions. The information collected by the DRE can facilitate an opinion

of impairment from the Toxicologist. New Mexico has a very strong DRE program, but unfortunately there are not enough DREs. For more information on the New Mexico DRE Program, contact the State Coordinator, Sgt. Murray Conrad at the Albuquerque Police Department (505 256 2050).

Although DRE training is preferable, most police officers are familiar with many of the signs of drug use. Documentation of signs and symptoms of drug use are important in impaired driving cases. Characteristic signs, symptoms or behaviors associated with drug use should be noted in the police report. If drugs are suspected, the arresting officer should document this on the SLD 705 form, which is submitted with the biological sample. Typical signs may include:

- **DEPRESSANTS**  
Sedated, confused, poor divided attention, slowed reaction times, memory effects, poor psychomotor skills, slurred speech, ataxia, disorientation, decreased pulse and blood pressure.
- **STIMULANTS**  
Hypervigilance, excitability, anxiety, self-absorbed, agitated, paranoid, delusional, obsessive activity, rapid speech, hand-wringing, bruxism, dilated pupils, elevated pulse and blood pressure.
- **CANNABINOIDS**  
Relaxed, sedated, confused, poor divided attention, slowed reaction times, memory effects, poor information processing, poor coordination, reddening of conjunctivae (in eyes), elevated pulse and blood pressure.
- **OPIOIDS/NARCOTIC ANALGESICS**  
Euphoria, sedated, confused, mental clouding, stupor, slowed reaction times, poor coordination, constricted pupils, decreased pulse and blood pressure.

### DRUG ANALYSIS

Drug analysis is automatically conducted if the blood alcohol concentration (BAC) is less than 0.08%. If the BAC exceeds 0.08% the investigator or prosecutor must contact the Bureau Chief by telephone to request drug analysis.

### TRAINING

The Toxicology Bureau of the Scientific Laboratory Division can provide on-site training at your agency. To request training on drug-impaired driving or other issues, contact the Toxicology Bureau Chief.

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