

ALCOHOL-RELATED MOTOR VEHICLE ENCOUNTER WITH A COW

By MICHAEL D. JACOBSON, DO, MPH

More than 32,000 aviators with a history of drug/alcohol abuse or dependence or drug/alcohol-related offenses currently hold FAA airman medical certificates (Skaggs, Norris, & Johnson, 2012). Despite a proven, effective deterrence and rehabilitation program for airline pilots, alcohol is still associated with 6-8% annually of pilot fatalities in aviation mishaps, especially in general aviation. This article presents the case of an alcohol-related auto accident involving a first-class pilot and reviews the history and state of relevant FAA policy.

Background

A 40-YEAR-OLD MALE FIRST-CLASS pilot with 900 total flying hours and 150 in the last six months, presented for first-class medical recertification four months after an alcohol-related motor vehicle accident. At the time of the incident, he held Airline Transport and Commercial Airman certificates.

The airman was restrained in his vehicle and traveling alone at night when he struck a cow in the road, triggering airbag deployment, a brief but indeterminate loss of consciousness, and multiple injuries. He was transported to a trauma center where comprehensive x-rays and CT scans revealed fractures of multiple ribs, sternum and scapula, and small, bilateral, apical pneumothoraces. Blood-alcohol concentration (BAC) in the emergency department was 105 mg/dL (0.105%).

He was hospitalized, treated conservatively for his injuries, and after three days was discharged on a normal diet and oral analgesics. The head injury was ruled a concussion (normal head CT), and he recovered uneventfully. Due to the blood-alcohol level, his airline employer requested a formal evaluation for alcohol/substance use disorder. A substance abuse professional reported that the airman had a history of controlled alcohol use without any consequent legal issues or offenses. Since the airman did not meet DSM-IV criteria for alcohol dependence, the substance abuse professional's findings were inconclusive, and a recommendation of total abstinence from alcohol was rendered.

Aeromedical concerns

Alcohol depresses the central nervous system, thereby degrading mental and physical performance in a dose-response manner, ranging from subtle impairment, such as inattention, prolonged reaction times and forgetfulness, to visual disturbances, ataxia, dysarthria, respiratory depression, and myocardial conduction disturbance (Franzos et al., 2012). Mumenthaler et al. (2003) showed that impaired performance continues beyond the eight-hour sobriety period in pilots intoxicated to 0.10%.

Outcome

Each time an airman applies to the FAA for a medical certificate, he/she must acknowledge (Block 18v) if arrested, convicted, or had an administrative action taken in regard to driving while under the influence of alcohol or any other drug.

ETIOLOGY OF ALCOHOL ABUSE

The prevalence of alcohol abuse and dependence in the general population is estimated to be 10% (Franzos, Franzos, Woolford, & McDonald, 2012). Its relevance to the safety of flight became a sudden and primary concern to the public in the wake of a 1964 article by Harper and Albers (Harper & Albers, 1964). Their study of blood and tissue specimens of 158 general aviation fatalities revealed that over one-third (35.4%) were positive for alcohol at a time when the alcohol-related pilot fatality rate was believed to be only 4%. Since ethyl alcohol from autopsy tissue can come not only from oral ingestion but as a byproduct of cellular decomposition, this study may have overestimated the level of drinking in pilots. Nevertheless, the article dramatically brought the issue of aviator substance abuse to the forefront of the public's attention. In the 1970s, the Air Line Pilots Association joined efforts with the federal government to develop what became the Human Intervention Motivation Study, a program to treat alcoholism in the airline pilot community and get them back to work.

The FAA has monitored alcohol-related motor vehicle convictions for pilot involvement since 1990. In accordance with Title 14 of the Code of Federal Regulations (CFR) part 61.15, pilots must report such incidents to their AME and to the FAA Civil Aviation Security Division ("FAA Security") within 60 days of an event. The FAA also prohibits any aircrew member from working in that capacity within eight hours of consuming alcohol ("bottle-to-throttle"), while under its influence, or with a BAC of 0.04% (40 mg/dL) or higher (14 CFR 91.17).

Policy changes and interventions have witnessed a sharp decline in alcohol-related aviation fatalities. Data from the Civil Aerospace Medical Institute (CAMI) indicate that mishaps, in which blood alcohol exceeded the 0.04% threshold, dropped from over 30% in the 1960s to 8% by 1993 to as low as 6.4% (Chaturvedi, Craft, Canfield, & Whinnery, 2005). The most recent five-year interval report (2004-2008) identified 1,353 pilot fatalities, of which 92 (7%) were found to have alcohol present in their systems in excess of 0.04%. Eighty-six (94%) were flying general aviation aircraft. Of the 208 pilots who died while holding an air transport pilot (ATP) rating, only 13 had alcohol in excess of standards, and none was on ATP duty at the time of the crash (Canfield, Dubowski, Chaturvedi, & Whinnery, 2012). Nevertheless, alcohol violations still occur in airline pilots. A study of 350 newspapers by Kraus & Li (2006) discovered 13 alcohol violation incidents involving 17 airline pilots between 1990 and 2006. In 85% of cases, the impaired pilot was first identified by airport personnel (e.g., security screeners). The average BAC was 90 mg/dL. Six of the 17 pilots were prosecuted criminally, with five serving jail time.

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Since no legal BAC was performed and this airman was never cited for a DUI, he had no obligation to report this incident under that requirement. However, additional instructions in the FAA's Guide for Aviation Medical Examiners for the application's Item 47 (psychiatric history) defines substance abuse as "Use of a substance in the last 2 years in which the use was physically hazardous (e.g., DUI or DWI) if there has been at any other time an instance of the use of a substance also in a situation in which the use was physically hazardous." In light of the obvious safety concern, the airline notified the FAA. After review, the FAA issued a letter affirming that the airman was still eligible for a first-class medical certificate, but warned him that any further alcohol-related offense or evidence of abuse would require a re-evaluation of his medical certification. This is the same likely FAA disposition if this were a first **and only** DUI offense (Guide for Aviation Medical Examiners, 2012).

About the Author

Colonel Michael D. Jacobson, USAF, MC, SFS, is Director of the joint United States Air Force Residency in Aerospace Medicine/Wright State University Family Medicine Residency Program. He is board certified in aerospace, family, and addiction medicine. Prior to returning to military service, Dr. Jacobson served as a civilian medical review officer and as medical director of an addiction treatment center, where he developed drug-free workplace and outpatient opiate treatment programs. He wrote this report while on rotation at the Civil Aerospace Medical Institute.

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