

NONE FOR THE ROAD:



Preventing DUI in the Sky

- A pilot departs into night instrument meteorological conditions and crashes. The accident site reveals a half empty bourbon bottle in the pilot's pocket. Toxicological testing reveals that the pilot's blood alcohol content (BAC) was .11 percent.
- An airplane collides with a dirt berm during an aborted landing, killing the pilot and two passengers. A bartender reports that prior to the accident, she served the pilot four alcoholic beverages, though he never seemed intoxicated. At the time of the accident, the pilot's BAC was at .30 percent.
- Witnesses watch as an airplane doing aerobatics goes straight up in the air, rolls over into a dive, and impacts the ground. The sheriff reports that the cockpit smelled strongly of alcohol and toxicology tests identify the pilot's BAC as .22 percent.
- A student pilot impacts mountainous terrain while on an unauthorized cross-country night flight. Toxicological testing reveals that the pilot had been using cocaine and two prescription narcotics prior to flight.

While researching topics for this medically-focused edition of the *FAA Safety Briefing*, I put a question to our aerospace doctors and physiologists — what topic would they most like to see us address

in an article? The answer was recreational drug and alcohol abuse, and the above snippets from various accident reports show they have cause for concern.

Flying Under the Influence

Your ability to process information is divided into three stages: stimulus identification (seeing a hazard), response selection (deciding to avoid the hazard), and response execution (veering to avoid the hazard). Driving a car involves a complicated mix of all three. Flying, while exhilarating, is an even more precise, demanding, and unforgiving endeavor. Any factor that impairs your ability to perform the required tasks during the operation of an aircraft is an invitation for disaster. Alcohol, recreational drugs, and even some prescription drugs, are perfect examples of just such a factor.

While this problem has been highlighted in commercial aviation, it is not as well documented in the world of general aviation, where a pilot can step into a plane and fly with little to no interaction with other people. There are no outside deterrents to help screen a person's sobriety, thus data collection is encumbered unless a mishap occurs.

"But I Don't Feel Drunk"

Fitness to fly goes far beyond making sure you have enough gas in the tank or favorable weather. It means thoroughly assessing your capability to



Photo courtesy of Civil Air Patrol

The Civil Air Patrol demonstrates the effects of alcohol through the use of “drunk goggles” during airshows as part of its Drug Demand Reduction program. Pilots are encouraged to test their reflexes and abilities through various games and simulations.

negotiate a safe flight. This includes recognizing the Bloody Mary you had at breakfast, or even the few martinis you had with dinner the night before, could legally and physically impair you from flying, even if you don’t “feel” drunk. The real problem is that quite often people just don’t realize that they have a problem.

There are three things you need to know to help determine your level of alcohol consumption: how to count a standard drink, how alcohol affects your body, and the effects alcohol has on your behavior.

For a reference, a standard drink is equal to one 12-ounce beer, 1.5 ounces of liquor, or 5 ounces of standard wine. Be warned: Many mixed drinks (e.g., Long Island Iced Tea) give you far more than just one “drink” in your glass.

To factor your BAC, use Figure 1. Keep in mind that the legal limit for intoxication is .08, and that the use of alcohol and drugs by pilots is regulated by 14 CFR section 91.17, which states that no person may operate an aircraft within eight hours of having consumed alcohol, while under the influence of alcohol, or with a BAC of .04 or greater.

As for illicit recreational drugs, there is no agreed-upon limit for which impairment has been

reliably demonstrated. Some drugs linger in the body for a period of days or weeks, so just don’t do it!

When considering how alcohol affects you, at a .05 BAC, most people begin to feel warm, sedated, and may experience a slight decrease in reaction time and fine-muscle coordination. Between .07 and .09, there is usually a noticeable speech impairment. Balance, motor skills, hearing, and vision are also greatly impaired. At .12, mental faculties and judgment are hampered. Over .14, and there is major loss of mental and physical control. A level of .30 or higher is classified as severe intoxication, and the potential for loss of consciousness is high.

If you would like additional training or someone to talk to your organization/class about the effects of drinking and flying, contact the Civil Air Patrol Drug Demand Reduction team:
ddr@capnhq.gov
877-227-9142 ext. 412

Self-Assessment Time

Don’t know if you have a problem? You owe it to yourself and to the flying community to find out. Many websites offer quizzes to try and determine your level of consumption, but one good one is www.alcoholscreening.org . This website lets you anonymously click through straightforward questions and then offers guidance based on your honest answers. Dr. Nicholas Lomangino, Deputy Manager for FAA’s Medical Services Division, recommends taking the self-assessment, even if you don’t think you have a problem. You just might be surprised with the results and regardless, the site provides good data to consider for the future.

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ALCOHOL IMPAIRMENT CHARTS (Approximate Blood Alcohol Percentages)

MALES							FEMALES													
Drinks	Body Weight in Pounds						Effect on Person	Drinks	Body Weight in Pounds						Effect on Person					
	100	120	140	160	180	200	220	240		90	100	120	140	160	180	200	220	240		
0	.00	.00	.00	.00	.00	.00	.00	.00	0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	Only Safe Driving Limit
1	.04	.03	.03	.02	.02	.02	.02	.02	1	.05	.05	.04	.03	.03	.03	.02	.02	.02	.02	Impairment Begins
2	.08	.06	.05	.05	.04	.04	.03	.03	2	.10	.09	.08	.07	.06	.05	.05	.04	.04	.04	Driving Skills Significantly Affected
3	.11	.09	.08	.07	.06	.06	.05	.05	3	.13	.14	.11	.11	.09	.08	.07	.06	.06	.06	Legally Intoxicated
4	.15	.12	.11	.09	.08	.08	.07	.06	4	.20	.18	.15	.13	.11	.10	.09	.08	.08	.08	Criminal Penalties in All States
5	.19	.16	.13	.12	.11	.09	.09	.08	5	.25	.23	.19	.16	.14	.13	.11	.10	.09	.09	
6	.23	.19	.16	.14	.13	.11	.10	.09	6	.30	.27	.23	.19	.17	.16	.14	.13	.11	.11	
7	.26	.22	.19	.16	.15	.13	.12	.11	7	.35	.32	.27	.23	.20	.18	.16	.14	.13	.13	
8	.30	.25	.21	.19	.17	.15	.14	.13	8	.40	.36	.30	.26	.23	.20	.18	.17	.15	.15	
9	.34	.28	.24	.21	.19	.17	.15	.14	9	.45	.41	.34	.29	.26	.23	.20	.19	.17	.17	
10	.38	.31	.27	.23	.21	.19	.17	.16	10	.51	.45	.38	.32	.28	.25	.23	.21	.19	.19	

Learn More
FAA Pilot Safety Brochure on alcohol and flying
www.faa.gov/pilots/safety/pilotsafetybrochures/media/alcohol.pdf