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When Bottle

Alcoholism is a chronic, often progressive disease that — untreated — can lead to death. The United Nations World Health Organization (WHO) estimates that, of about 2 billion people worldwide who consume alcoholic beverages, about 76 million have diagnosable problems related to alcohol.¹

WHO data show that alcohol causes 1.8 million deaths a year. Alcohol consumption is associated with more than 60 types of disease and injury, including esophageal cancer, liver cancer, cirrhosis of the liver, epileptic seizures and motor vehicle accidents.

For pilots, excessive alcohol consumption presents risks not only to health but also to their flying careers. The International Civil Aviation Organization (ICAO) says that alcoholism among crewmembers is relatively infrequent and that less than one pilot in every 5,000 worldwide loses his or her professional license each year because of problems associated with alcohol.^{2,3} Programs exist to help pilots stop drinking (and engaging in other forms of substance abuse) and return to the flight deck.

Medical specialists differentiate between alcoholism — also known as alcohol dependence — and alcohol abuse. *Alcoholism* is characterized by a craving for alcohol; a loss of control, or inability to stop drinking; physical dependence on alcohol, with withdrawal



Alcoholism among flight crewmembers is rare but does exist. Afflicted pilots can turn to programs designed to help them stop drinking and keep their jobs.

BY LINDA WERFELMAN

symptoms such as nausea, shakiness or anxiety after stopping drinking; and an increased tolerance for alcohol, which results in increased consumption to produce the “high” associated with drinking. *Alcohol abuse* is a related condition in which excessive drinking results in health or social problems in someone who may not display all characteristics of alcoholism and is not dependent on alcohol (see “Signs of a Problem,” page 34).

Physical dependence on alcohol develops gradually, as alcohol consumption changes the balance of some

chemicals in the brain — including those associated with pleasure, inhibition and excitement — and causes a craving for alcohol. Other factors associated with excessive drinking and eventual dependence on alcohol include genetic factors that may increase vulnerability to alcoholism; emotional factors such as stress, anxiety or emotional pain; and low self-esteem or depression.⁴

For pilots and others in the aviation industry, occupational factors may appear to encourage alcohol consumption.

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Meats Throttle



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“Stress, prolonged and frequent absences from home and family, and boredom play a role in ... alcohol consumption,” the International Center for Alcohol Policies (ICAP) said in a report that discussed alcohol in civil aviation. “With respect to the impact of alcohol on the performance of job-related duties, the relationship seems to be similar to that between drinking and driving. Alcohol reduces reaction time and impairs performance in a dose-dependent manner. While there is some evidence that at lower [blood alcohol concentration] levels, impairment may — at least

in part — be compensated for by a pilot’s experience, any such compensation — to the extent that it exists — only applies to familiar or routine situations. The ability to perform in an emergency or an unfamiliar circumstance remains impaired.”⁵

Another occupational factor that can increase the temptation to drink is difficulty sleeping, which often results from working odd hours, such as those worked by pilots on overnight and long-range flights.

The ICAO *Manual of Civil Aviation Medicine* says that a pilot should

be diagnosed with “drug dependence of the alcohol type” if his or her alcohol consumption “exceeds the amount culturally permitted, or if he habitually drinks at times which are outside the accepted licensing hours, or if he injures his health or his social relationship by repeated excessive alcoholic consumption.”

The “culturally permitted” amount of alcohol consumption varies considerably. Data compiled by ICAP on “sensible drinking guidelines” include suggestions by authorities in Indonesia and the Philippines to “avoid drinking alcoholic beverages,” by authorities in the United States to consume no more than one or two drinks a day, and by the French National Academy of Medicine not to exceed five drinks a day.

ICAO considers alcohol dependence difficult to cure and a potential hazard to flight safety because of its interference with reaction time and judgment.

“For these reasons, alcoholism is a bar to holding a flying license ... unless the applicant abstains completely and then only if accredited medical conclusion considers the prognosis good,” ICAO says.

When a pilot is diagnosed with alcoholism and his or her medical certificate is revoked, ICAO prescribes 12 months of total abstinence, during which the pilot visits a company



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Signs of a Problem

Indications of a drinking problem — either alcoholism or alcohol abuse — may include:^{1,2}

- Drinking alone;
- Feeling a need to drink, and being unable to limit alcohol consumption;
- Establishing a drinking “ritual” that typically involves drinking before, during or after dinner, and feeling annoyed if the ritual is interrupted or irritable as drinking time nears, especially if alcohol is not available;
- Developing increased tolerance, so that more drinks are required to feel the effects of alcohol; and,
- Experiencing withdrawal symptoms — including nausea, sweating or shaking — without alcohol.

Indications that may be seen in pilots and other aviation personnel include:³

- Frequent absences from work, and repeatedly calling in sick at the last minute;
- Errors in flight planning or maintenance procedures because of a lack of attention to detail and intellectual deterioration caused by drinking; and,
- Frequent trips to hotel bars during layovers.

Medical specialists say the answers to the following questions may help determine whether someone has a problem with alcohol:⁴

- Have you ever thought that you should limit your drinking?
- Have you been annoyed by other people criticizing your drinking?
- Have you felt guilty about your drinking?
- Have you had a drink first thing in the morning to “steady your nerves” or get rid of a hangover?

Specialists say that one “yes” answer may indicate an alcohol problem; two or more “yes” answers indicate that a problem is very likely.

— LW

Notes

1. U.S. National Institute on Alcohol Abuse and Alcoholism (NIAAA). *FAQs: How Can You Tell If Someone Has a Problem?* <www.niaaa.nih.gov/FAQs>.
2. Mayo Clinic. *Alcoholism Overview*. <www.mayoclinic.com/health/alcoholism/DS00340>.
3. Snyder, Quay C. “FAA-Sanctioned Pilot Alcohol Abuse Programs in Business Aviation.” In *Issues, Decisions and Attitudes: A Spring Break for Safety: Proceedings of the 48th Annual Corporate Aviation Safety Seminar*. Alexandria, Virginia, U.S.: Flight Safety Foundation, 2003.
4. NIAAA.

physician or family physician every two weeks and a psychiatrist every three months; at each meeting with the psychiatrist, the pilot should provide a note from the family physician and another note from a close relative “to confirm that the patient has remained completely abstemious,” ICAO says.

After this, the pilot may be permitted to resume flight duties if he continues to avoid alcohol and visits a psychiatrist every six months for two years “with the same evidence of complete abstention.” Any relapse should result in permanent loss not only of medical certification but also of pilot licenses, ICAO says.

Old Attitudes

At one time — in part because of the threat that they would lose their jobs — airline pilots with drinking problems typically ignored their abuse of alcohol until they had reached the late stages of alcoholism.^{6,7}

“A diagnosis of chemical dependency once created a seemingly insurmountable obstacle in getting the help needed,” Donato J. Borrillo, M.D., a senior aviation medical examiner, wrote in the Spring 2003 issue of *The [U.S.] Federal Air Surgeon’s Medical Bulletin*. “In addition, fellow pilots and flight attendants were reluctant to intervene for fear of threatening a colleague or friend’s livelihood.”

Then, in the mid-1970s, the U.S. National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the Air Line Pilots Association, International (ALPA) formed an alliance to develop and test a program that treated alcoholism as a disease. The program — the Human Intervention Motivation Study (HIMS) — was designed to enable afflicted pilots to stop drinking and to seek medical recertification and a return to their flight duties.

“The HIMS program charter is to save lives and careers while maintaining flight safety,” the HIMS mission statement says. “Trained managers and peer pilots interact to identify and, in many cases, conduct an intervention to direct the troubled individual to a substance abuse professional for a diagnostic evaluation. If deemed medically necessary, treatment is then initiated. Following successful treatment and comprehensive continuing care, the pilot is eligible to seek FAA [U.S. Federal Aviation Administration] medical recertification.”⁸

During the three decades of its existence, the HIMS program — administered by ALPA under contract with FAA — has helped more than 3,500 airline pilots in the United States, providing treatment for alcohol or drug abuse and enabling them to return to the flight deck, said Donald Hudson, M.D., ALPA’s aeromedical adviser. The program’s success rate is about 85 percent, which means that about 15 percent of the pilots who receive alcoholism “special issuance”⁹ medical certificates from FAA relapse before mandatory retirement at age 60.¹⁰ About two-thirds of all relapses occur within the first two years after receipt of the special issuance; because FAA policies differ from ICAO’s in this regard, most of these pilots return to the treatment program — and then go back to work and stay sober for the remainder of their flying careers, Hudson said.

If a pilot experiences a second relapse, FAA’s response typically does not allow a return to flight duties.

Several years after creation of the HIMS program in the United States, a similar program was established in Canada. Today, about

30 airlines are active in HIMS programs. In addition, some airlines have established similar, in-house treatment programs.

Paul Collins-Howgill, M.D., head of the U.K. Civil Aviation Authority (CAA) Aeromedical Certification Unit, said that, although airlines in the U.K. have not adopted peer-intervention programs similar to HIMS, most are “sympathetic and cooperative when a pilot with an alcohol problem is identified.”

Anthony Evans, M.D., chief of ICAO’s Aviation Medicine Section, said that most major airlines and regulatory authorities have rehabilitation programs.

Through the HIMS program, an afflicted pilot is evaluated — in accordance with FAA requirements — by a specially trained aviation medical examiner (AME), who coordinates the pilot’s medical recertification. After the initial treatment, which often involves 28 days in an inpatient program, the AME oversees regular — typically, monthly — interviews of the pilot by a trained flight manager and pilot peer committee member and follow-up observations that continue for months after the pilot returns to the flight deck.

Treatment continues with a period of “aftercare” — sometimes called “continuing care” — during which the monitoring of the pilot proceeds, typically through weekly group meetings with other airline pilots who also are fighting alcohol or drug problems. Aftercare may continue for



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months or years as part of a system designed to ensure the pilot's continuing abstinence. Participation in Alcoholics Anonymous, or a similar alcoholism-recovery support group, is encouraged but not required.

A pilot can receive a new special issuance medical certificate from FAA as early as 120 days after initial treatment, if he or she has completed program requirements, been evaluated by an aviation medical examiner and provided FAA with all required paperwork.

'Benevolent Persuasion'

Most pilots do not enter the program voluntarily, the HIMS treatment statement says.

"Most arrive because of some type of benevolent persuasion," the statement says. "Many believe their job is threatened. This endangers their entire sense of being and identity. To lose their license and be denied flying would shake the very foundation of their universe. They enter with great suspicion."

Once in the program, however, they "immediately set forth to complete the 'checklist,' memorize the 'manual,' follow all 'procedures,' ... pass the counselor's 'check ride,' and maintain the proper 'glide path' to recovery."

In recent years, a treatment program resembling HIMS has been developed for corporate pilots and flight departments. Quay Snyder, M.D., president of the aeromedical consulting group Virtual Flight Surgeons (VFS), said that VFS has designed the corporate Aviation Alcohol and Substance Abuse Abatement Program (AASAAP) "to mirror HIMS, [while] recognizing the varying philosophies and requirements of different operators." As of July 2006, about 20 pilots from 12

companies had received treatment, had their medical certificates reinstated and returned to flying, with continued monitoring of their progress. One fractional ownership operator also has implemented a version of AASAAP.

"We are trying to bring the same health, safety and career protection benefits to the corporate aviation community, but the business aviation world has yet to decide if they recognize the problem and want to take steps to make their profession a safer and healthier one," Snyder said. "Currently, most companies — with a few notable exceptions — choose not to recognize the problem, to ignore it or drive it underground by firing pilots who may have a medical problem. That hurts their bottom line and compromises safety." ●

Notes

1. United Nations World Health Organization. *Global Status Report on Alcohol — 2004*. Geneva, Switzerland, 2004.
2. International Civil Aviation Organization (ICAO). *Manual of Civil Aviation Medicine*. Part III, "Medical Assessment," Chapter 9, "Mental Fitness and Neurological Examination." 1985.
3. For example, Paul Collins-Howgill, M.D., head of the U.K. Civil Aviation Authority (CAA) Aeromedical Certification Unit, said that his 2004 audit of the CAA Drug and Alcohol Clinic found that initial assessments were conducted of 29 pilots (27 men and two women). Of the 29 assessments, 26 involved alleged misuse of alcohol and three involved alleged drug misuse. Eleven pilots were identified as requiring further treatment. Two patients relapsed, and two of the initial patients "decided to stop flying and continue drinking," he said. "The professional pilot population in the U.K. is 20,000, so [ICAO's] one in 5,000 figure seems correct."

4. Mayo Clinic. *Alcoholism Overview*. <www.mayoclinic.com/health/alcoholism/DS00340>.
5. International Center for Alcohol Policies (ICAP). *Alcohol and the Workplace*. August 2003. < www.icap.org>.
6. Russell, Julia C.; Davis, Audie W. *Alcohol Rehabilitation of Airline Pilots*, DOT/FAA-AM-85-12. U.S. Federal Aviation Administration Civil Aeromedical Institute. 1985.
7. Borrillo, Donato J. "The HIMS Program." *The Federal Air Surgeon's Medical Bulletin* Volume 41 (Spring 2003): 10.
8. Human Intervention Motivation Study (HIMS). *About HIMS*. <himsprogram.com/index.php>.
9. U.S. Federal Aviation Regulations Part 67, *Medical Standards and Certification*, says that a special issuance of a medical certificate is granted at the discretion of the federal air surgeon to applicants who do not meet specific medical requirements "if the person shows to the satisfaction of the federal air surgeon that the duties authorized by the class of medical certificate applied for can be performed without endangering public safety during the period in which the authorization would be in force."
10. Donald Hudson, M.D., aeromedical adviser for the Air Line Pilots Association, International, said that some relapse is to be expected because of the nature of alcoholism as a chronic brain disease. By comparison, the success rate of substance abuse treatment programs for the general public is between 50 and 60 percent, Hudson said.

Further Reading From FSF Publications

Mohler, Stanley R. "Medical Advances Enable FAA to Grant More Discretionary Medical Certificates to Pilots." *Human Factors & Aviation Medicine* Volume 46 (July–August 1999).

Mohler, Stanley R. "Continued Caution Urged for Pilot Use of Alcohol." *Human Factors & Aviation Medicine* Volume 45 (March–April 1998).