

feature



MAY CAUSE DROWSINESS

The impact of impairing medications on pilots and mechanics

STORY BY LINDSEY MCFARREN



“This medication may cause drowsiness and dizziness.”

“Do not drive or operate heavy machinery while taking this drug.”

“This drug may blur your vision.”

How often do you read the warning labels on a medication – whether prescription or over-the-counter – before taking the drug?

Pilots are generally subject to strict medical requirements and must report any prescription medication to the Federal Aviation Administration (pilots flying under a recreational pilot’s certificate must comply with

the BasicMed rule, which has different requirements) but may not fully understand the effect of OTC medications on their body.

Some of the OTC medications that may cause bad effects, such as allergy and cold medications and sleep aids, are rather obvious. Other drugs, like anti-diarrheal medications, can cause dizziness or other side effects. According to the FAA, an airman should not fly while using a medication – whether prescription or OTC – that is labeled “may cause drowsiness” or advises the user not to drive or use heavy machinery.

Aircraft maintenance technicians, however, are not subject to the same medical testing or reporting requirements as pilots. While the potential risk for these medications for pilots is clear, most people don’t consider the potential impact on aircraft maintenance technicians. Whether completing detail-oriented tasks, working on a lift, or operating heavy equipment, the side effects of prescription or OTC medications can lead to disaster through incomplete or poor work on an aircraft or injury – or worse – to the technician or a colleague.

NTSB and FAA research and recommendation

In a National Transportation Safety Board study of accident pilots, which reviewed data from 1990 through 2012, an average of 25 percent of study pilots had at least one positive finding in blood or tissue specimens with the prevalence of positive toxicology findings increasing “markedly” during the study period. In 2011, 40 percent of study pilots had positive toxicology findings for potentially impairing drugs, drugs used to treat potentially impairing conditions, and/or controlled substances.

OTC sedating antihistamines, non-sedating OTC drugs, cardiovascular medications, antidepressants, and illicit drugs top the NTSB’s list of positive findings by drug category in accident investigations.

Diphenhydramine, an active ingredient in Benadryl and Unisom, was the most commonly identified potentially impairing drug.

Don’t underestimate the potential effect of diphenhydramine. The NTSB’s study cites a driving simulator study that found a single dose of diphenhydramine impaired driving ability more than a blood alcohol concentration of 0.1 grams per deciliter, which is just over the legal limit for driving in most states in the U.S. One dose of Benadryl or other medications containing diphenhydramine can lead to impairment almost equal to illegally driving under the influence of alcohol.

The NTSB issued a safety recommendation related to OTC, prescription, and illicit drugs in 2014, citing the fact OTC, prescription, and illicit drug use is increasing in the U.S. population.

The NTSB’s safety recommendation to the FAA stated the agency should “Develop, publicize, and periodically update information to educate pilots about the potentially impairing drugs identified in your toxicology test results of fatally injured pilots, and make pilots aware of less impairing alternative drugs if they are available.”

Industry Work

The General Aviation Joint Steering Committee, an FAA/industry working group on which the AEA participates, tackled OTC drug interactions as part of its Loss of Control Working Group activities. Although focusing on the impact of medications on airmen, the lessons learned are directly applicable to aircraft technicians.

The GAJSC analyzed a random sample of a decade of general aviation accidents reported to the NTSB that involved loss of control during approach and landing.

The GAJSC found that drugs prohibited by the FAA

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contributed to 12 percent of the general aviation accidents reviewed. The working group also pointed to FAA research indicating 42 percent of pilots involved in all fatal accidents tested positive for drugs or medications, with diphenhydramine detected in over 6 percent of all fatal accident pilots.

The working group then published an open letter to pilots explaining the potentially adverse effects of certain impairing drugs, with a focus on sedating antihistamines.

Mitigate the risk

Know which drugs may negatively impact your work performance. Review the FAA's Do Not Issue – Do Not Fly website, which lists commonly used

medications and potential side effects, and avoid drugs that may cause impairment.

Know how long a medication is in your blood.

The FAA says a good rule of thumb is five times the half-life of the medication, which can be determined by reading the dosing interval. For example, if a medication says to take it four times a day, the dosing interval is six hours. The wait time after the last dose, according to the five times rule of thumb, would be 30 hours (6 hours x 5 = 30 hours). That is certainly solid advice for pilots and mechanics.

Reactions to medications vary by the individual and even circumstances of a given day or scenario. It's important to know how a particular medication impacts your reaction time and general well-being. It might be necessary to call off work while taking a medication or conduct only certain activities.



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What about marijuana?

In the NTSB's study, positive findings for illicit drugs increased from 2.3 percent in the 1990 to 1997 period to 3.8 percent in the 2008 to 2012 period. Marijuana was the most commonly cited illicit drug with an increase from 1.6 percent in 1990 to 1997 to 3 percent in the 2008 to 2012 period – an increase of almost double!

If you are a safety-sensitive employee, as defined by the Department of Transportation, marijuana use of any kind is a violation of drug policies, regardless of your state laws related to medical or recreational marijuana. Specifically, 14 CFR Part 120 defines safety-sensitive functions and prohibits a person from conducting those functions for a certificate holder, including a Part 121, 135 or 145 certificate holder, while having a prohibited drug including marijuana in their system.

The DOT reiterated this prohibition in a 2017 notice about medical marijuana, stating, "It remains unacceptable for any safety-sensitive employee subject to drug testing under the Department of Transportation's drug testing regulations to use marijuana."

If your position is not considered to be safety sensitive, your employer may still have policies related to the use of medical or recreational marijuana. Even if you are not technically prohibited from using marijuana, you should consider the potential impact on your job performance.

It seems every other commercial on TV is selling a medication, and each of those commercials ends with a long list of potential side effects and interactions. Be sure you know the effects of medications on your body, and use caution when conducting activities that may result in injury to you or someone else or unsafe work product. □

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