FEDERAL AVIATION GUIDELINES

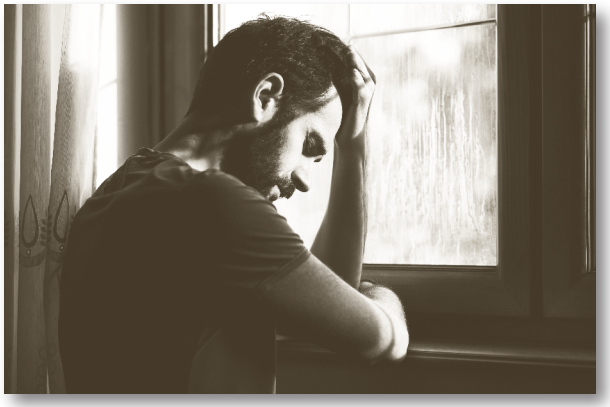
All the drugs mentioned in this brochure are unacceptable in the aviation environment. It is a violation under the Federal Aviation Regulations (FAR; 14 CFR 61.53) to operate aircraft while using impairing medications. Should a pilot take one of these medications for any reason, the underlying medical condition will always need assessment to obtain medical certification. If the medical condition is acceptable for certification, the use of medication then becomes the issue. Continued or intermittent use of opioid medication is problematic, and an individualized assessment is necessary. However, if the opioid is used on a short term basis or is no longer needed, the question is "When can the pilot return to flying duties?"

Due to dosage and individual differences, return to duty time can vary. Although there are exceptions, the FAA recommends, as a general rule, 5 drug half-lives or 5 maximal dosing intervals. A pilot who has taken hydrocodone/acetaminophen for an acute pain issue should wait approximately 20 to 30 hours since the drug can be taken every 4 to 6 hours.

According to the FAA's qualification standard found in 14 CFR 67, a pilot need only have one of the following to be considered dependent on a substance:

- Increased tolerance
- Manifestation of withdrawal symptoms
- Impaired control of use
- Continued use despite damage to physical health or impairment of social, personal or occupational function

The FAA also has a standard for abuse that includes a positive test under the DOT testing program. It is a technical violation of the regulations to operate aircraft while these substances can still be detected. These drugs have been detected during autopsy in general aviation accidents and, more commonly, can be detected in pilots subject to Drug and Alcohol Testing regulations. When prescription opioid medications show up in DOT drug tests, the donor is given an opportunity to show a Medical Review Officer (MRO) a valid prescription for the drug detected. A valid prescription is one which was written for the donor, and the donor is taking the medication appropriately for the prescribed condition. The MRO is empowered, if all conditions are met, to downgrade the positive laboratory test to a negative MRO verified test. However, the MRO is still obligated to report to the designated employer representative the use of medications that could adversely affect safety.



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Federal Aviation Administration

OPIOID EPIDEMIC and AVIATION

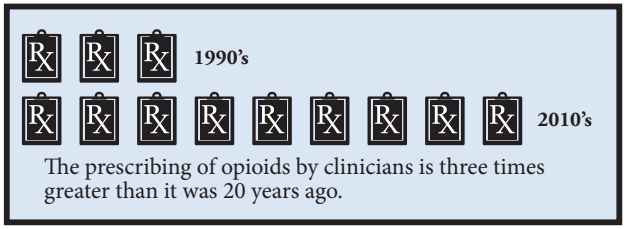
The Civil Aerospace Medical Institute

THE PROBLEM:

In 2015 there were 22,000 deaths involving prescription opioids (natural, synthetic, and semi-synthetic), or 62 deaths per day. In addition to the increase in prescription opioid misuse, America's opioid epidemic is also driven by a surge in illicit opioid overdoses, primarily heroin and illegally-made fentanyl, which accounted for an additional 15,000 deaths in the same year, or 42 deaths per day.[1]

The Centers for Disease Control and Prevention (CDC) data demonstrates that prescription misuse is significantly associated with heroin use, as is overprescribing, which facilitates non-medical use. The longer a prescription opioid is taken, the higher the risk for misuse and potential addiction and overdose.[2]

While the average volume of opioids prescribed per capita has declined since 2010, the average duration of opioid prescriptions in 2015 is 18 days, a 38% increase from 2006. The rates of abuse and dependence (10.8–12.9 per 1,000) are the highest in 13 states: West Virginia, Oregon, Indiana, Rhode Island, Arizona, Kentucky, Oklahoma, New Hampshire, Massachusetts, Arkansas, Nevada, Washington, and Delaware.[3] While these numbers seem staggering, it is estimated that specific drugs are not recorded on 17% of death certificates[4]

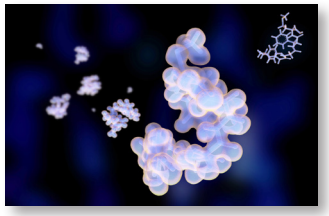


The prescribing of opioids by clinicians is three times greater than it was 20 years ago.

MORE SPECIFICS ABOUT OPIOIDS

The stimulation of the opioid receptors in the deeper regions of the brain results in drowsiness that could lead to respiratory depression which, in turn, can lead to overdose and death. Interestingly, with repeated administration of opioid drugs, the production of endogenous opioids will decrease. This is the cause of the discomfort that occurs when opioid drugs are withdrawn.

People who take opioids by non-prescribed routes of administration also run the risk of death by respiratory arrest or coma. This is especially true of long acting or extended release formulations.



Opioids have a tendency, when they are used repeatedly, to result in tolerance. Tolerance results from the ability of opioids to desensitize the brain's own opioid system, making it less responsive over time. This tolerance contributes to the elevated risk of overdose during a period of relapse of opioid use after a period of abstinence, so users who may not realize they have lost their tolerance during a period of abstinence may initially take a dangerously high dosage.

IMPACT OF CHRONIC PAIN

According to government estimates,[5] chronic pain affects an estimated 100 million Americans, or one third of the U.S. population. Approximately 25 million people have moderate to severe chronic pain significant enough to limit activity and affect performance.

DEPENDENCY PREVENTION

Opioid medications used long term can lead to addiction. One long-term study looking at the effects of opioids on pain relief, quality of life, and functional capacity showed no benefit.[6]

While opioids are considered the best treatment for some types of pain, an NIH expert advisory panel[5] recommended potentially effective alternatives such as "a range of progressive approaches that might initially include nonpharmacologic options, such as physical therapy, behavioral therapy, and complementary and alternative medicine approaches with demonstrated efficacy, followed by pharmacologic options, including nonopioid pharmacotherapies."

The bottom line is increased awareness is needed regarding treatment options, which suggests solutions as individual as a patient's own response to pain.[7]

INFORMATION FOR AVIATION MEDICAL EXAMINERS AND PILOTS:

All U.S. Department of Health and Human Services (HHS)-certified test facilities were mandated to implement procedures for expanded opioid testing (hydrocodone, hydromorphone, oxycodone, and oxymorphone) after midnight September 30, 2017. While implementation is pending, those in safety sensitive positons, including pilots and air traffic controllers, should implement the following best practices:

- Do not take another person's medication. It is unlawful; it was prescribed for a specific purpose and person for whom the provider evaluated potential drug interaction and disease conditions.
- Do not take medication for a condition other than for what it was prescribed. For example, do not use unused medications dispensed for a root canal for your sudden onset of back pain. Narcotics should not be used without knowing the diagnosis of the painful condition. You could be masking a life threatening disorder and risking your life.
- Do dispose of unused medications. The Drug Enforcement Agency (DEA) and local health programs run medication take-back programs. Unfortunately, the drugs in our homes can be diverted for illicit use.
- Do consider an over-the-counter test kit before resuming safety-related duties. This will assess your likelihood of testing positive.