



Avoiding Adverse Drug Interactions

Impairment from medication, particularly over the counter (OTC) medication, has been cited in a number of accidents in general aviation. In a 2011 study from the FAA's CAMI Toxicology Lab, drugs/medications were found in 570 pilots (42%) from 1,353 total fatal pilots tested. Most of the pilots with positive drug results, 90%, were flying under CFR Part 91.

What's the Problem?

We all know that some drugs may compromise a pilot's ability to control the aircraft and/or adversely affect judgment and decision making. The difficulty comes for accident investigators in trying to quantify the known detriment that comes with various medications and the underlying conditions that require their use.

Another area of concern is that airmen do not always disclose all of their medical conditions to their Aviation Medical Examiner (AME). Both the undisclosed condition and the treatment can endanger the airman and compromise public safety. Undisclosed treatments could hide potentially impairing drug interactions. That's why it's important to disclose any medications you are taking to your AME. According to a 2015 CDC study, nearly 74% of doctor office visits resulted in drug therapy and 24% of the U.S. population had 3 or more prescriptions. In addition, many medications have unexpected interactions with other

medications, including over the counter medications (OTCs), supplements, and herbals. For example, antihistamines can adversely react with some prescription drugs used to treat high blood pressure. These interactions can be exacerbated in the aviation environment.

Also certain foods can increase or decrease the concentration of some drugs. An example is grapefruit or grapefruit juice which can affect how long some medicines may stay in the body and may cause dangerous side effects. Here's a resource you can use to learn more about adverse food and drug reactions: <https://bit.ly/3jvOCZF>. It describes some but by no means all, adverse drug and food interactions.

How Long?

So if you have to take an impairing medicine, how long should you wait before you resume flying? Every medicine is different, but a good rule of thumb is 5 times the half life of the medication, or by the dosing interval (if the half-life information is unavailable). If a medication says to take it 4 times per day, the dosing interval would be 6 hours. Therefore the wait time after the last dose would be 30 hours (6 hours x 5 = 30 hours). Other medications may have longer or shorter intervals which is why it's important to talk to your AME.



Where Can I Get More Information?

A good place to start is the new OTC medication guide listed below. The guide provides pilots with a list of OTC medications that are used to treat a common ailment that are generally safe (GO) and those that are not (NO-GO). Take a close look at this list because some medications we regard as equivalent may have very different impacts on safety. Be sure to check out the Do Not Issue/Do Not Fly section too. You can also find good information on drugs through trusted government sites like the National Institute of Health's Medline site at <https://medlineplus.gov>. This site lists both generic and trade names along with side effects and warnings for almost every drug out there.

What to Look For

The Food and Drug Administration (FDA) requires standard labeling for all OTC medications. These standard medication labels include the active ingredients, directions for use, and highlight potential side effects like drowsiness in the warning section. Be sure to check out our new OTC medication guide listed on the right.

Supplements may also interact with OTC and prescription medications to cause impairment. It's also important to note that supplements may have similar labels, but are not regulated by the FDA, and therefore do not need to meet a specific standard. This is especially true for cannabidiol (CBD) products. The CBD industry has widely varying quality control and labeling leading to significant discrepancies from package labels including much

higher THC levels than disclosed. This can cause both impairment and possibly a positive drug test. Therefore, the FAA recommends against the use of CBD products by airmen.

Resources

- ◆ What OTC Medications Can I Take and Still Be Safe To Fly?
www.faa.gov/go/pilotmeds
- ◆ AME Guide — Pharmaceuticals
www.faa.gov/about/office_org/headquarters_offices/avs/aam/ame/guide/pharm/
- ◆ AME Guide — Do Not Issue — Do Not Fly
www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/pharm/dni_dnf/

Drug Facts									
Therapeutic substance in drug	Active ingredient (in each tablet) Chlorpheniramine maleate 2 mg	Purpose Antihistamine	Product type						
	Uses temporarily relieves these symptoms due to hay fever or other upper respiratory allergies: ■ sneezing ■ runny nose ■ itchy, watery eyes ■ itchy throat		Symptoms or diseases the drug treats						
When not to use this drug, when to stop taking it, when to see a doctor, and possible side effects	Warnings Ask a doctor before use if you have ■ glaucoma ■ a breathing problem such as emphysema or chronic bronchitis ■ trouble urinating due to an enlarged prostate gland Ask a doctor or pharmacist before use if you are taking tranquilizers or sedatives When using this product ■ You may get drowsy ■ Avoid alcoholic drinks ■ Alcohol, sedatives, and tranquilizers may increase drowsiness ■ Be careful when driving a motor vehicle or operating machinery ■ Excitability may occur, especially in children If pregnant or breastfeeding, ask a health professional before use. Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.								
More information on how to store the drug	Directions <table border="1"> <tr> <td>Adults and children 12 years and over</td> <td>Take 2 tablets every 4 to 6 hours; not more than 12 tablets in 24 hours</td> </tr> <tr> <td>Children 6 years to under 12 years</td> <td>Take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours</td> </tr> <tr> <td>Children under 6 years</td> <td>Ask a doctor</td> </tr> </table> Other information Store at 20-25° C (68-77° F) ■ Protect from excessive moisture		Adults and children 12 years and over	Take 2 tablets every 4 to 6 hours; not more than 12 tablets in 24 hours	Children 6 years to under 12 years	Take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours	Children under 6 years	Ask a doctor	Read carefully: how much to take, how often to take it, and when to stop taking it
Adults and children 12 years and over	Take 2 tablets every 4 to 6 hours; not more than 12 tablets in 24 hours								
Children 6 years to under 12 years	Take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours								
Children under 6 years	Ask a doctor								
	Inactive ingredients D&C yellow no. 10, lactose, magnesium stearate, microcrystalline cellulose, pregelatinized starch		Other things in the drug, such as colors or flavorings						

