

# Medication & Flying

Even a minor illness in a pilot can cause a major problem while flying. In addition, accidents have occurred because of pilot's disability related to disease and/or medication. People tend to regard the over-the-counter drugs as well as herbal medication safer and that they have less side-effects than prescribed medications. However, this is not true, and especially in an aviation environment some over-the-counter drugs, such as anti-histamines, have side-effects that can not be tolerated and these medications are not allowed. In addition, many symptoms that are negligible on the ground may worsen while flying, so in many cases the underlying illness itself is usually the major reason for not to fly. Therefore, licence holders should be encouraged always to consult their AME (authorised medical examiner) before taking any medicine. Quite often other physicians than AMEs show a serious lack of knowledge in the field of aviation medicine and therefore consultation with AME and not a general practitioner or other non-aviation familiar doctor is highly encouraged.

Sometimes the consultation with AME (authorised medical examiner) is impossible and the decision whether to take or not to take the medication is left to the pilot himself. Therefore here are some guidelines for pilots in this kind of situations.

***Before taking any medication a pilot should ask himself these three questions:***

1. Are you fit to fly?
2. Do you really need the medication?
3. Have you taken the medicine previously and are you sure that it does not affect your ability to fly?

If the answer is yes to all three questions, then a pilot may consider taking the medication.

There follows some further information on some commonly used medications and their compatibility with flying.

## ***Antibiotics***

Antibiotics are used to treat bacterial infections. Usually the underlying disease is such that it hinders flying and medication is not an issue. Common side-effects of antibiotics are abdominal upsets, either in the beginning of treatment or after a couple of days of treatment. In conclusion, a pilot should always ask for AME's opinion before flying and taking antibiotics.

## ***Loperamide***

Loperamide is used for diarrhoea. It is derived from opioids and it reduces the motility of the bowel. Between the brain and blood humans have blood-brain barrier, which means that everything in the blood does not get into the brain. Loperamide is basically unable to cross the blood-brain barrier and therefore should not have any effects in the central nervous system. However, it is an opioid derivative and therefore should not be used while flying. In addition, the diarrhoea itself is a no go item for flying.

## ***Sleep inducing drugs***

Most of the over-the-counter sleep inducing drugs are older anti-histamines. They affect the central nervous system and are not very effective in treatment of insomnia. Their side effects include dizziness, drunken movements, blurred vision, and dry mouth and throat. They are not suitable for pilots.

Most of the prescribed sleep inducing drugs are benzodiazepines, imidazopyridines (zolpidem) or cyclopyrrolones (zopiclone). They vary with their half-time and usually short-acting ones are used for insomnia. All of these drugs have interactions with alcohol, which should be avoided with this kind of medication. People also develop tolerance to these drugs if they are used regularly. The prescribed sleep inducing drugs are good if they are used only for a short period of time (maximum 1-2 weeks) and the reason for insomnia can be identified. Pilots are not encouraged to use sleep inducing drugs and these drugs are not allowed the night before the flight.

Melatonin is a hormone secreted by pineal gland. Although the physiological effects of melatonin are not fully understood, its main effects include regulation of the circadian system, and modulation of sleep, alertness and body temperature. Melatonin acts as a chronobiotic – advancing or delaying the sleep/wake cycle so that sleep onset occurs earlier or later than usual. This is distinct from a hypnotic, which induces sleep without affecting the circadian rhythm. The popular view is that melatonin induces sleep - it doesn't. Instead of inducing sleep pharmacologically, it acts as a sleep promoter, allowing sleep to occur when

conditions are right for sleep. It has long been suggested that melatonin could accelerate the natural adjustment to local time and a number of studies have been conducted with contradictory results. Some trials have shown benefits in relieving symptoms of jet lag, whilst others have not. The issue is still unclear and melatonin is not recommended for pilots.

### ***Analgesics***

All analgesics that affect the central nervous system are prohibited while flying. Most of the so called non steroidal anti-inflammatory drugs (acetyl salicylic acid, ibuprofen, ketoprofen, naproxen acid etc.) are allowed, as long as disease for which the medication is required, allows one to fly. In addition, a pilot should have taken the medication previously to be sure that it does not have any adverse effects.

### ***Anti-allergy drugs***

Anti-histamines are used to treat allergies. Most of the anti-histamines are not allowed while flying because they may induce sleepiness. There are two antihistamines (loratadin and feksofenadin) that are allowed by FAA and JAA, but a pilot still should have AME's permission to use this kind of medication.

Nasal sprays that contain corticosteroids or chromoglicates are allowed while flying.

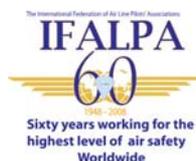
### ***Erectile dysfunction medication***

The side-effects of Sildenafil (Viagra®) include disturbances in colour vision and dizziness, so it should not be used at least the night before the flight. There are other similar medications -tadalafil; (Cialis® or vardenafil (Levitra®) that do not have these side-effects.

In conclusion, the use of medication while flying is very conservative. When in doubt of a drugs compatibility with flying, a pilot should always ask AME's advice.

The following sources of information can be useful to pilots and Member Associations

-  *ICAO Manual of Civil Aviation Medicine – Part III – Chapter 13 – Hazards of Medication and Drugs*
-  *ICAO Manual of Civil Aviation Medicine – Part V – Chapter 3 – Medical Facts for Pilots*
-  *FAA 14 CFR Part 67 (Sections 67.113, 67.213, and 67.313), 14 CFR Part 61 (Section 61.53), 14 CFR Part 91 (Section 91.17), and Advisory Circular 91.11-1 (“Guide to Drug Hazards in Aviation Medicine”)*
-  *JAA JAR-FCL 3 – Section 2 – Medication and Flying*
-  *JAA JAR-FCL 3.115 – Use of medication or drugs (including anaesthetics)*



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