

Medication and Flying

Please note: This paper supersedes 09MEDBL01 - Medication & Flying

INTRODUCTION

Many pilots have requested a list of medications that are acceptable to take while flying. Unfortunately, such a list does not exist. In many cases, it is the underlying illness itself, and not the medication, that may be disqualifying.

An accepted rule in aviation medicine is that if a pilot feels so sick that they need medication, generally, they are too sick to fly. Even a minor illness such as the common cold could incapacitate a pilot and have safety implications for the flight.

Currently, there exists no universal list of medication considered acceptable to take while flying. Medications considered acceptable to take while flying vary between countries. For example, some medications may be allowed by the FAA but forbidden in Europe, and vice versa. There is no global consensus.

Any medication has the potential to cause an allergic reaction which may be either instantaneous or delayed; this has flight safety implications.

There is a tendency for people to regard over-the-counter and/or herbal medications as safer than prescribed medications in the erroneous belief that the former may have fewer side-effects and, as such, be less harmful. This is not necessarily true, particularly in an aviation environment. Some over-the-counter drugs, such as cough medicines, are forbidden because of their potential side effects which, in addition to the underlying medical condition, makes flying not permissible.

ADVICE AND CONSULTATION

Doctors and physicians who are not Aerospace Medicine Specialists or Aviation Medical Examiners (AMEs) may not be familiar with the specialty and practice of Aviation Medicine. IFALPA recommends that pilots who feel sick and require medication or medical treatment should seek advice and or consultation with an Aerospace Medicine Specialist or an AME, as well as their general practitioner, before taking any medication.

BEFORE TAKING MEDICATION

Sometimes the consultation with an aviation specialist is impossible and the decision whether to take the medication is left to the pilots themselves. Before taking any medication, pilots should ask themselves these three questions:

1. Am I fit to fly?
2. Do I really need to take the medication?
3. Have I taken the medicine previously on the ground for at least 24-48 hours, and am I sure that it does not affect my ability to fly?

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

CONSIDER THE HALF-LIFE

Other rules concern the half-life of the medication. A medication's biological half-life refers to how long it takes for half of the dose to be metabolized and eliminated from the bloodstream. If a pilot takes any medication which may prevent them from flying, they should wait at least 5 times (in some countries the recommendation is for 8 times) the half-life of the medication before flying. The half-life can be determined from the dosing interval: If a medication should be taken four times a day, the dosing interval would be every six hours. Therefore, the wait time after the last dose would be 30 hours (6 hours x 5=30 hours).

Below, you will find further information on some commonly used medications and their compatibility with flying.

This list is for reference only, it is not exhaustive, and it does not consider the pilot's individual situation. When in doubt, the pilot should always obtain aeromedical advice.

COMMONLY-USED MEDICATIONS

Acne Treatments

Isotretinoin (Roaccutane®) may have side effects of reduced night vision or depression, both of which are aeromedically significant. Aeromedical advice must be sought, a period of ground trial may be required, and a temporary restriction on night flying during treatment may be issued.

Antibiotics

Antibiotics are used to treat bacterial infections. Typically, the presence of an infection indicates the pilot is not fit to fly. Common side effects of antibiotics include abdominal upsets which also disqualify pilots from flying. It is preferable that the pilot take the antibiotics at least 24 hours before flying in order to be sure that there are no side effects. Pilots should always obtain aeromedical advice before considering flying and taking antibiotics.

Anticoagulants

Certain anticoagulants are approved and allowed while flying, however, the pilot must have been medically assessed, treated, and reviewed in accordance with the AME guidelines of the Regulatory authority e.g. CAA, EASA. The pilot must have had their medical reinstated by the AME and deemed fit to fly in accordance with the authority's medical guidance material. If an international normalized ratio (INR) measurement is required, the anticoagulation must be stable for 6 months prior to pilot recertification. If direct acting oral anticoagulants (DOACs) are used, the time period is 3 months. Flying on anticoagulants always requires approval from the appropriate aviation authority before flying.

Anti-Diarrheal Drugs

These medications are used to manage diarrhea. Typically, diarrhea is considered as disqualifying from flying and a pilot is regarded as not fit to fly when suffering with diarrhea. However, some anti-diarrheal drugs are usually safe to take while flying. One of the most commonly used drugs is Loperamide. Common side effects include abdominal pain, constipation, sleepiness, vomiting, and dry mouth. The CAA U.K. states "Loperamide can be used for control of diarrhea provided it has been taken for at least two days when license privileges are not being exercised and has not caused adverse side-effects."¹

Antidepressant Medications

In this case, it is most likely that the underlying condition will result in the pilot being deemed unfit to fly. The negative side effects of these medications on the central nervous system are most often incompatible with flying duties. In some countries, several Selective Serotonin Re-uptake Inhibitors (SSRIs), when used as maintenance medication, may be permissible when flying. The pilot must be asymptomatic, be on a steady dose, and have been appropriately medically assessed by an aerospace medicine specialist or AME with approval from the relevant aviation authority.

Antihistamines

Antihistamines are mainly used to treat allergic reactions (e.g. hay fever, asthma, and allergic rashes). In many cases, the underlying condition may preclude flying. The medication itself may cause drowsiness, dizziness, and changes in vision, but these side effects predominantly occur with older antihistamines. Newer, so-called non-sedative antihistamines may be compatible with flying duties; however, it has been shown in some studies that all antihistamines may cause daytime drowsiness. IFALPA recommends seeking aeromedical advice before taking these medications whilst flying.

Anti-Ulcer Medicines

These medications are commonly used to treat the symptoms of a peptic ulcer. Some of these medications (e.g. omeprazole, ranitidine, cimetidine) are acceptable for the short-term treatment of dyspepsia and acid reflux provided pilot symptoms are well controlled. However, the license holder is unfit if there is evidence of peptic ulceration.

It is important to establish a diagnosis of the possible underlying condition first, before considering the use of these medications. Any active gastrointestinal bleeding must be ruled out and disqualifies the pilot from flying. Aeromedical advice should be obtained before using these medications.

¹ [https://www.caa.co.uk/Aeromedical-Examiners/Medical-standards/Pilots-\(EASA\)/Conditions/Gastrointestinal/Medication-used-in-GI-conditions/](https://www.caa.co.uk/Aeromedical-Examiners/Medical-standards/Pilots-(EASA)/Conditions/Gastrointestinal/Medication-used-in-GI-conditions/)

Anti-Malaria Drugs

The decision on the need of anti-malaria drugs depends on the geographical areas to be visited and the risk that the pilot has of developing malaria. Medical opinion should be obtained to establish whether anti-malaria drugs are needed and what type of drugs should be used. Most of the anti-malaria drugs (atovaquone plus proguanil, chloroquine, doxycycline) are compatible with flying, but mefloquine is not. The adverse effects associated with mefloquine include insomnia, strange dreams, mood changes, nausea, diarrhea, and headaches. In addition, mefloquine may cause spatial disorientation and lack of fine coordination.

Blood Pressure Medication

Most anti-hypertensive drugs are compatible with flying. Medications affecting the central nervous system are unacceptable. There is usually a period of grounding when anti-hypertensive treatment is started to monitor the blood pressure and side effects of the medication, i.e. the pilot is temporarily declared unfit for duty. Aeromedical advice is needed before returning to flying after commencement of the medication in addition to satisfactory control of the underlying condition.

Contraceptives

Hormonal contraception is compatible with flying regardless of the way of administration – oral, subcutaneous, transdermal, intravaginal or intrauterine.

Cough Medicines

Cough suppressants (antitussives) often contain codeine and other substances that act on the central nervous system and are therefore not allowed when flying. Other cough medications, such as mucolytic agents (e.g. carbocysteine) are allowed.

Erectile Dysfunction Medication

The possible side effects of these medications (e.g. sildenafil/Viagra®, tadalafil/Cialis®, and vardenafil/Levitra®), include disturbances in color vision, dizziness, and sudden hearing loss. Aeromedical advice needs to be obtained to determine the appropriate time between the use of any of these medications and flying, which is often 6-8 hours for sildenafil and vardenafil and 24 to 36 hours for tadalafil.

Melatonin

Melatonin is a hormone that is involved with the regulation of the circadian rhythm. In some countries it is a prescription medicine whereas in most countries it is regarded as a dietary supplement and can be purchased without a prescription. Melatonin affects modulation of sleep, alertness, and body temperature; it typically acts as a sleep promoter, allowing sleep to occur when conditions are right. Consequently, and unsurprisingly, results regarding the efficiency of melatonin in treatment of jet lag or sleep disorders have been contradictory. There is also some evidence that the chronic use of melatonin may lead to hypertension. It is advisable to obtain aeromedical advice before using melatonin.

Nasal Corticoids

These drugs are widely used to treat hay fever and can be used whilst flying if symptoms are mild and there is no other underlying cause of the symptoms.

Nasal Decongestants

Nasal decongestants are commonly used in the form of a spray. The underlying condition requiring its use (i.e. swelling of the mucosal membranes, causing difficulties in equalizing the air pressure in the ears and/or sinuses) is considered incompatible with flying, and despite the use of this medication, seeking aeromedical advice is recommended. Nasal decongestants that do not have an adverse effect on the central nervous system may be approved for use during flight.

Pain Killers and Anti-Febrile Drugs

These medications are commonly used to treat pain, fever, or headaches. Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) and paracetamol may be taken whilst flying. However, often the underlying condition dictates the fitness to fly.

Strong analgesics (e.g. codeine) are opiate derivatives and affect the central nervous system. They may significantly affect human performance and are therefore prohibited while flying. Such medications may also give a positive result in a drug test.

Postmenopausal Hormone Replacement Therapy

Hormone replacement therapy for postmenopausal symptoms is compatible with flying.

Prostate Hyperplasia Medication

5-alpha-reductase enzyme inhibitors such as Finasteride and Dutasteride are usually compatible while flying, however this is after an initial grounding for approximately 48 hours after first dose of medication. Aeromedical advice is required prior to return to flying duties.

Selective alpha-antagonists Tamsulosin and Alfuzosin may cause postural hypotension, syncope, dizziness, and fatigue, and pilots will be confined to the ground for a period after starting this medication or being prescribed an increase in dose.

Sleep Inducing Drugs

When pilots develop difficulty sleeping, the focus should be to discover and treat the reason for the insomnia. This often requires assessment by the AME and or an appropriate specialist. Several underlying conditions causing insomnia are considered disqualifying for flying.

Typically, side effects of sleep inducing medications may include in particular, dulling of the senses and slower reaction time both of which are contraindications to flying. Such medications have variable half-lives and interact with alcohol. The duration of effect may vary between individuals and may be unduly prolonged. Some people may also develop a tolerance for such medications. Some of these medications may give a positive result in a formal drug test. Some regulatory bodies permit the use of sleep-inducing drugs for a limited time only and in instances where the reason for insomnia can be identified.

A pilot should always seek aeromedical advice before using sleep inducing drugs. This is particularly important because different countries can have differing policies for pilots suffering with insomnia irrespective of the cause.

Smoking Cessation Drugs

Nicotine replacement therapy is acceptable. However, any medication such as bupropion and varenicline affecting the central nervous system is not acceptable.

CONCLUSION

The condition or the disease itself may preclude flying duties, even despite the use of medication. When considering taking any medication, the pilot should make sure this medication is compatible with flying duties. If there is any doubt whether the medication is safe to take whilst flying, a pilot should consider themselves unfit to fly until proven otherwise and obtain aeromedical advice.

SOURCES

The information in this Briefing Leaflet was derived from the following sources of information, these sources may also be useful to pilots and Member Associations:

ICAO Manual of Civil Aviation Medicine – Part III – Chapter 14 – Hazards of Medication and Drugs

ICAO Manual of Civil Aviation Medicine – Part V – Chapter 2 – Medical Facts for Pilots

EASA Part MED GM1 MED.A.020 Decrease in medical fitness MEDICATION — GUIDANCE FOR PILOTS AND CABIN CREW MEMBERS

FAA Guide for Aviation Medical Examiners' Pharmaceuticals (Therapeutic Medications): Do Not Issue - Do Not Fly

FAA Safety Briefing: Pilots and Medication. September 2015

[https://www.caa.co.uk/Aeromedical-Examiners/Medical-standards/Pilots-\(EASA\)/Guidance-for-medical-certification-of-EASA-pilots-by-condition/](https://www.caa.co.uk/Aeromedical-Examiners/Medical-standards/Pilots-(EASA)/Guidance-for-medical-certification-of-EASA-pilots-by-condition/)

<https://www.aviationmedicine.com/medication-database/>

CASA Medications: <https://www.casa.gov.au/standard-page/medication>