

**STAR 022**

V1 – September 2017

**Drugs and Alcohol Testing**

**Introduction**

From the initiation of the pre-flight process through to the securing of the aircraft at the end of the flight, flight crew are required to undertake hundreds of decisions and actions of varying complexity. Such decisions include weather interpretation, fuel uplift and en-route selection, all individually critical to the overall safe operation and navigation of the aircraft. Proper procedures must be observed and executed at all times, ensuring that the flight is safely completed.

Anything, e.g. drugs or alcohol, that is likely to impair a pilot's ability to make decisions or execute the associated tasks will almost certainly increase the potential for an incident or even an accident. The purpose of this STAR is to provide members with an understanding of the effects of Drug and Alcohol abuse, and the options for testing and guidance on their application.

**Drugs**

Drugs, and/or the condition or illness for which they have been taken, or the use of recreational drugs can have a negative impact on pilot performance and efficiency and, consequently, pose a significant risk to safety of an aircraft. Both prescription and non-prescription (over-the-counter) drugs can impair judgement and degrade coordination. Common side effects of many non-prescription drugs, such as cold/influenza tablets, can include drowsiness, confusion, blurred vision and dizziness. Such side effects can become more pronounced when the individual is at altitude.

Drugs may also have a cumulative effect and, if more than one drug is taken at the same time, the combined negative effect may be well in excess of that of the individual drugs. Likewise, prescription drugs such as antibiotics or antidepressants can have a pronounced effect on judgement, mental acuity and coordination.

The following is a list of the more commonly found prescribed and non-prescribed drugs:

- **Antihistamines:** Antihistamines are commonly taken to reduce the effects of an allergy or for a specific allergic reaction. They cause a level of sedation with varying degrees drowsiness (dependent upon both the drug and the individual), which can result in degraded reaction time and disturbances of equilibrium and balance.
- **Sulfa Drugs:** Sulfa drugs are antimicrobial drugs, which inhibit the growth of bacteria. They have been known to cause an allergic reaction including visual disturbances, dizziness, impaired reaction time, and depression.
- **Tranquillisers:** Tranquillisers effect reaction time, cause drowsiness, reduced concentration and division of attention.
- **Motion Sickness Medications:** Motion sickness remedies can cause drowsiness and suppress brain function. They can also result in temporary deterioration in judgement and in



decision-making skills.

- **Weight Loss Drugs:** Appetite suppressing drugs inclusive of amphetamines can cause feelings of wellbeing that can effect judgment.
- **Barbiturate:** Barbiturate (including phenobarbital), is a drug that acts as a central nervous system depressant, which produces a wide spectrum of effects from mild sedation to total anesthesia. As such, use of this drug can noticeably reduce alertness.

Finally, the use of any illicit or recreational drug is completely incompatible with flight safety.

## Alcohol

When alcohol is consumed, it is very rapidly absorbed into the blood and tissues of the body but the process of detoxification is quite slow. The impairing effects of alcohol are apparent quite soon after ingestion, but it takes approximately three hours for the effects of 1oz/28g of alcohol to wear off.

It has been determined that when alcohol is absorbed into the fluid of the inner ear it remains there longer than in the bloodstream, brain and body tissues. Since the inner ear affects balance, the presence of alcohol within the vestibular apparatus can lead to spatial disorientation and the potential of vertigo.

The presence of alcohol in the blood interferes with the normal absorption of oxygen by the tissues and can result in Histotoxic Hypoxia. As the reduced cabin pressure at high altitudes has already reduced the ability of the haemoglobin to absorb oxygen (Hypoxic Hypoxia), the effect of alcohol in the blood during flight at high cabin altitudes becomes much more pronounced than it would be at sea level. The negative effects of one drink can be magnified as much as two to three times due to the cumulative effects of alcohol and altitude. Many reported cases of passenger air rage have been a consequence of excessive alcohol consumption prior to, and/or during the flight.

## Regulatory Requirements

Rules and regulations are in place to protect the safety of all passengers, employees and cargo, and aviation stakeholders are monitored by their respective industry regulators, including the European Aviation Safety Agency (EASA). Each government aviation authority has a role in setting safety standards including monitoring the performance of personnel.

Alongside government aviation authorities, the International Civil Aviation Organisation (ICAO) sets aviation standards and regulations for its member states. The following are some examples of what is prohibited under ICAO Annex 19:

- Reporting to work under the influence of alcohol,
- The consumption of alcohol less than 8 hours prior to the specified reporting time at the workplace
- Reporting to work in any safety-critical area under the influence of any prescriptive or non-prescriptive medication or drug, unless the person is completely sure that the medication or treatment will not have any adverse effect on their ability to perform their duties safely

Despite strict regulations on drug abuse and alcohol misuse, there are still occurrences where airline employees are found to be misusing drugs and alcohol. Risks should be eliminated by implementing a strict workplace drug and alcohol testing policy and proactively carrying out regular testing.



When an airline introduces a drugs and alcohol policy for the first time, it is important for all individuals, regardless of their job role, to be fully appraised of what is expected of them as an employee. However, the airline must also offer a support process to individuals who self-report a drug or alcohol problem to facilitate their rehabilitation.

### **Drug and Alcohol Screening Programs**

In 2016 EASA established a Task Force that provided the industry with six recommendations moving forward. One of the six recommendations was for airlines to mandate drugs and alcohol testing, as follows:

*‘Operators should develop and implement a policy for flight and cabin crew, with related testing procedures, to avoid and prevent the misuse of psychoactive substances to ensure that the safety of the aircraft or its occupants is not endangered. Without prejudicing the provisions laid down in Directive 95/46/EC and any applicable national legislation on testing, the operator will have to develop and implement an objective, transparent and non-discriminatory procedure for the detection of cases of misuse of psychoactive substances by crew. This procedure must take into account the provisions laid down in MED.B.055 of Regulation (EU) No 1178/2011.’*

The screening program should be carried out by staff specifically trained in the process. Deciding which drugs and medicines to test for and the frequency of testing should be determined by the individual airline in conjunction with the AME (Aero-Medical Examiner). Such decisions could be influenced by the location of the safety critical employees, by employment and residence. In addition, local factors may play a part, including the availability of particular substances, accepted regional practices and the availability of medicines, certain types of food and drugs. Cultural practices and the diversity of the workforce and sectors flown should also be taken into account.

All drugs and alcohol testing should ideally not be too invasive, and will normally require screening test by mouth swab, breath, blood, hair and/or urine samples. Minimal notice should be provided prior to a random test and the process designed to ensure the result is reliable. If a positive result is determined, further (usually blood) testing should be undertaken. If the result remains positive after the further test, the result should then be reported to the relevant regulatory authority.

Any drugs and alcohol screening program must take into account the background rational to such undertaking ‘recreational behaviour’. Life changing issues of a personal nature can heavily influence an individuals need to resort to excessive alcohol consumption or substances abuse and as such the involvement of a Peer Support Program is paramount. Otherwise, such screening could have a detrimental impact on the effectiveness of the latter program. For example, it could undermine the trust and support of individual pilots as well as of pilot associations and existing pilot support programs.

Random testing on drug and alcohol inside a pilot support program should ideally be done as part of a follow-up after rehabilitation and return to work. There should be room for interpretation, which might encourage any type of random testing done by a pilot support program on non-participants or on participants that have other than substance misuse issues, such as mental health issues, or other problems. Otherwise, this would discourage flight crew from seeking help and undermine trust.



## References and Further Information

**EASA Opinion No. 14/2016:** Aircrew Medical Fitness:

<http://www.easa.europa.eu/system/files/dfu/EASA%20Opinion%2014-2016.pdf>

**Skybrary:** The effects of Drugs and Alcohol on Pilot Performance:

[http://www.skybrary.aero/index.php/The\\_Effects\\_of\\_Alcohol\\_and\\_Drugs\\_on\\_Pilot\\_Performance](http://www.skybrary.aero/index.php/The_Effects_of_Alcohol_and_Drugs_on_Pilot_Performance)

Information on the effects of medication, drugs, other treatments and alcohol can be found in **Annex IV (Part-MED)** to Commission Regulation (EU) No. 1178/2011

<https://www.easa.europa.eu/document-library/regulations/commission-regulation-eu-no-11782011>

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