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# FLIGHT SURGEON'S GUIDELINES

# GUIDELINES FOR THE MANAGEMENT OF ALCOHOL-RELATED DISORDERS IN AIRCREW

References:

A. CFAO 56-36 – Department of National Defence Drug and Alcohol Program

B. CFAO 19-31 – Misuse of alcohol

C. CFMO 29-21 – Treatment of Alcoholism

D. Medical Directive 3/83 – Alcoholism Rehabilitation Program – Base Addiction Counsellor

E. American Psychiatric Association – Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition 1994 – (DSM IV)

TABLE OF CONTENTS

GENERAL ........ 1
DIAGNOSIS ........ 2
TREATMENT ........ 3
RELAPSE ........ 3
REFERRAL ........ 4
ANNEX A - DEFINITIONS ........ 5
ANNEX B - AIDS TO DIAGNOSIS ........ 6
ANNEX C - AIRCREW POST TREATMENT CONTRACT ........ 10
ANNEX D - CONTRACT ........ 11
ANNEX E - LIST OF SUGGESTED PROVIDERS OF PHASE II SERVICES ........ 12
ANNEX F - LIST OF USEFUL REFERENCES – AVIATION EFFECTS & DIAGNOSIS ...... 15

## GENERAL

1. The above references are quite comprehensive regarding the management of Alcohol Abuse/Dependence in the Canadian Forces and they should be consulted as necessary. However, there are unique concerns, related to the aviation environment, which require further direction. This guideline is based on current medical knowledge of alcoholism as a medical disorder and represents the consensus opinion of the fully constituted Central Medical Board in consultation with the 1 CAD Flight Surgeon and the Aeromedical Advisor to the Chief of the Air Staff. Because of concerns regarding operational effectiveness and flight safety, deviation from this guideline should only occur after obtaining appropriate aeromedical advice from Central Medical Board.

2. Aeromedical Concerns (Risk Discussion) – The subtle performance decrement effects after even low doses of ethanol are well documented. These include increased reaction time, procedural errors and inattentiveness. With increasing blood levels one has loss of inhibitions and poor judgment. It can cause and potentiate disorientation including production of positional alcohol nystagmus and vertigo and impaired ability to suppress inappropriate vestibular nystagmus. This susceptibility exists long into the hangover period. Ingestion of alcohol causes reduced $+G_Z$ tolerance and is associated with a higher accident rate in both ground and flight operations. Chronic ingestion with GI, CV and CNS effects can produce performance degradation and increased potential for sudden incapacitation.

3. When use becomes abuse, the hallmark of this medical disorder is denial, with increasing tolerance for the substance. Monitoring for recurrence of abuse is an essential requirement.

4. In summary, Aeromedical Risks are significant and are as follows:

a. Performance decrement

b. Increased risk of sudden incapacitation

c. Risk of recurrence of abuse

d. Difficulty in detecting recurrence

DIAGNOSIS

5. Patients may present as outlined in CFMO 29-21 para 3(a)(b)(c). In summary they may seek assistance voluntarily, be referred by the CO or present with another complaint.

6. The diagnosis of alcohol abuse or dependence in aircrew should not be taken lightly as it has significant long-term career implications involving acceptance of lifestyle changes as well as the usual effects for everyone, i.e. insurance. Regardless of career implications, the Flight Surgeon must be cognizant of the very significant operational and flight safety implications of having an aircrew member flying with this medical disorder.

> **Note:** Alcohol mis-users are managed as per CFMO 29-21 para 5. In summary this is an individual who may exhibit unacceptable behaviour related to the consumption of alcohol but who does not meet the diagnostic criteria of abuse or dependence.

7. Aircrew members who meet the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM IV - 4th Edition) criteria for either Alcohol Abuse or dependency are considered to have a treatable disease. Flight Surgeons should have Base or Wing Alcohol Counsellor consultation on every case and if necessary additional consultation preferably with an Addictionologist or with a Psychiatrist familiar with the management of alcoholism or any other specialist deemed appropriate in order to clearly establish the diagnosis. This is of course in addition to their normal medical examination and laboratory testing. DSM-IV definitions are attached as Annex A.

8. When an aircrew member has a clearly established diagnosis of either alcohol abuse or dependence, treatment is mandatory. Because of flight safety implications aircrew do not have the option of refusing treatment and being placed on counselling and probation as an alternative (CFAO 19-31 para 15). If the aircrew member understands the requirement for treatment and refuses treatment, he/she will be recommended unfit flying status and assigned an A7. If the aircrew member requests further support of the diagnosis a second qualified opinion should be obtained.

9. Annex B to this guideline outlines recommended tests and procedures, which may assist in establishing a diagnosis.

TREATMENT

10. Upon diagnosis of abuse/dependence of an aircrew member, the general considerations of treatment apply (CFMO 29-21).

11. A category is assigned of:

a. G4(T6) – unfit overseas, UN or isolated duty. Requires inpatient medical care with scheduled medical care by a medical officer more frequently than every six months;

b. A7(T3) – unfit aircrew duties, fit to fly as passenger.

12. Arrangements are made for an acceptable civilian inpatient treatment program (Annex C) preferably to begin within 4 to 6 weeks. Alternatives to an inpatient treatment program would only be acceptable in unusual circumstances and only after the concurrence of 1 CAD Flight Surgeon.

13. After successful completion of the Inpatient Program an active flying category is awarded if certain conditions have been met and agreed to in writing see Annex D.

14. The initial A7(T3) temporary grounding can be extended for a further 3 or 6 months if felt necessary in individual cases.

15. The temporary G4(T6) geographic deployment restrictions must be maintained for the full six months. It is expected that the temporary category may be removed at this time, however dependant upon individual circumstances an extension of 3 or 6 months may be required.

RELAPSE

16. Strict abstinence from alcohol and other mood altering drugs is a requirement to remain on aircrew status. Treatment failure or relapse which occurs in the first six months following in-patient treatment will require a further period of temporary grounding and re-assessment of treatment options, e.g. further in-patient therapy. Relapse after a permanent air category has been assigned, which would include a return to occasional or social consumption would result in

an immediate loss of aircrew status. In these unique cases consultation with Central Medical Board is required. An aircrew member may be considered for re-treatment counselling and subsequent reinstatement of flying privileges provided that the previously stated conditions (para 13) have been met.

## REFERRAL

17. The variable circumstances of individual cases may lead to difficulties in diagnosis and/or management. The Flight Surgeon may at any time during the process of identification, diagnosis, treatment or follow-up consult with Central Medical Board and if mutually agreeable, refer the Aircrew member to Central Medical Board for addiction specialist consultation and recommendations.

# DEFINITIONS

1. Alcohol Mis-user:
   Reference: CFMO 29-21 para 5

   An alcohol misuser is an individual who exhibits unacceptable behaviour, related to the consumption of alcohol, but who does not meet the diagnostic criteria of alcohol abuse or dependence.

2. Alcohol Abuse:
   Reference: Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994) section 305.00

   School and job performance may suffer either from the after effects of drinking or from actual intoxication on the job or at school; child care or household responsibilities may be neglected; and alcohol-related absences may occur from school or job. The person may use alcohol in physically hazardous circumstances (e.g., driving an automobile or operating machinery while drunk). Legal difficulties may arise because of alcohol use (e.g., arrests for intoxicated behaviour or from driving under the influence). Finally, individuals with Alcohol Abuse may continue to consume alcohol despite the knowledge that continued consumption poses significant social or interpersonal problems for them (e.g., violent arguments with spouse while intoxicated, child abuse). When these problems are accompanied by evidence of tolerance, withdrawal, or compulsive behaviour related to alcohol use, a diagnosis of Alcohol Dependence, rather than Alcohol Abuse, should be considered.

3. Alcohol Dependence:
   Reference: Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994) section 303.90

   Physiological dependence on alcohol is indicated by evidence of tolerance or symptoms of Withdrawal. Alcohol Withdrawal is characterized by the development of withdrawal symptoms 12 hours or so after the reduction of intake following prolonged, heavy, alcohol ingestion. Because Withdrawal from alcohol can be unpleasant and intense, individuals with Alcohol Dependence may continue to consume alcohol, despite adverse consequences, often to avoid or to relieve the symptoms of withdrawal. A substantial minority of individuals who have Alcohol Dependence never experience clinically relevant levels of Alcohol Withdrawal, and only about 5% of individuals with Alcohol Dependence ever experience severe complications of withdrawal (e.g., delirium, grand mal seizures). Once a pattern of compulsive use develops, individuals with Dependence may devote substantial periods of time to obtaining and consuming alcoholic beverages. These individuals often continue to use alcohol despite evidence of adverse psychological or physical consequences (e.g., depression, blackouts, liver disease, or other sequelae).

**Annex B**
**To Guidelines for the Management**
**Of Alcohol Related Disorders in Aircrew**

# AIDS TO DIAGNOSIS

1. General Management:
   Reference: Stein Internal Medicine – 4th ed. (1994)

   It is imperative for the physician to manage the patient's overall health with knowledge of the disease of alcoholism, especially if therapy for alcoholism is not initiated. Alcoholics are a heterogeneous population who can best be characterized by their inability to recognize the negative impact of alcohol on their lives. The diagnosis of alcoholism must be contemplated when any patient presents a spectrum of medical complications or psychosocial problems such as marital and family disruption and employment and legal difficulties.

   Laboratory testing (e.g., liver function tests or complete blood count) and direct questioning about alcohol use by the physician are of limited sensitivity and specificity, and unreliable as sole diagnostic methods. The many clinically validated questionnaires, such as the Michigan Alcoholism Screening Test (MAST) and the CAGE, are easily used in the office. Interviewing collateral associates of the patient significantly enhances the diagnosis of alcoholism; most alcoholics are diagnosed by family and friends before physician contact or intervention.

2. Reference: A. Stein Internal Medicine – 4th Ed. (1994) Tables
   B. Current Medical Diagnosis & Treatment – 37th Ed. (1998) Table 1-9

   a. CAGE

| | | Sensitivity | Specificity |
|---|---|---|---|
| C | Have you tried to cut down on your drinking? | 75 | 96[a] |
| A | Are you annoyed by people telling you to stop drinking? | | |
| G | Do you feel guilty about your drinking? | | |
| E | Do you drink on first getting up in the morning (eye opener)? | | |

[a] For two or more yes answers in CAGE: Interpretation: Two "yes" answers are considered a positive screen. One "yes" answer should arouse a suspicion of alcohol abuse.

   b. Laboratory Studies

| | | |
|---|---|---|
| Elevated GGT | 54 | 76 |
| Increased mean corpuscular volume | 63 | 74 |
| Elevated liver function test (OT, PT) results | 37 | 81 |

3. Essentials of Diagnosis

Reference: Current Medical Diagnosis & Treatment – 37th Ed. (1998)

*Major criteria:*

- Physiologic dependence as manifested by evidence of withdrawal when intake is interrupted.
- Tolerance to the effects of alcohol.
- Evidence of alcohol-associated illnesses, such as alcoholic liver disease, cerebellar degeneration.
- Continued drinking despite strong medical and social contraindications and life disruptions.
- Impairment in social and occupational functioning.
- Depression.
- Blackouts.

*Other signs:*

- Alcohol stigmas: alcohol odour on breath, alcoholic facies, flushed face, scleral injection, tremor, ecchymoses, peripheral neuropathy.
- Surreptitious drinking.
- Unexplained work absences.
- Frequent accidents, falls or injuries of vague origin; in smokers, cigarette burns on hands or chest.
- Laboratory tests (elevated values of liver function tests, mean corpuscular volume, serum uric acid and triglycerides).

4. Criteria for Substance Abuse

Reference: Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994)

a. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period:

(1) recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household)

(2) recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use)

(3) recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct)

(4) continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication, physical fights)

b. The symptoms have never met the criteria for substance Dependence for this class of substance.

5. Criteria for Substance Dependence

Reference: Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994)

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same12-month period:

a. tolerance, as defined by either the following:

(1) a need for markedly increased amounts of the substance to achieve intoxication or desired effect

(2) markedly diminished effect with continued use of the same amount of the substance

b. withdrawal, as manifested by either of the following:

(1) the characteristic withdrawal syndrome for the substance

(2) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms

c. the substance is often taken in larger amounts or over a longer period than was intended

d. there is a persistent desire or unsuccessful efforts to cut down or control substance use

e. a great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects

f. important social, occupational, or recreational activities are given up or reduced because of substance use. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse be alcohol consumption)

# AIRCREW POST TREATMENT CONTRACT

## Introduction

This is a letter to introduce you to the Canadian Forces approach to Alcohol - Related Disorders specifically for Aircrew. You will be required to agree in writing to certain conditions and to participate in a monitoring program. The monitoring program will last for two years or longer if deemed necessary by mutual agreement. The approach is designed to assist Canadian Forces Aircrew in continuing their recovery while returning to their flying duties.

The approach as outlined in "Guidelines for the Management of Alcohol - Related Disorders in Aircrew" has been accepted by the Chief of the Air Staff. A copy of the "Guideline" is provided for your information and reference. You will be monitored at your Base and all assistance possible will be given during your monitoring period.

________________________________

Col R. Davidson, M.D.
Medical Advisor to CAS

**Annex D**
**To Guidelines for the Management**
**Of Alcohol Related Disorders in Aircrew**

CONTRACT

Conditions For Awarding of Active Flying Category. Post Treatment of Alcohol - Related Disorders

I have read and fully understand the “Guideline” and introduction to the approach and agree to adhere to the following conditions:

1. I agree to abstain from alcohol and mood altering drugs in any form as a requirement for returning to flying duties and further agree that I will remain abstinent as long as I am on aircrew status.

2. I agree to take no medication unless recommended as an adjunct to treatment and authorized with appropriate restrictions by my monitoring Flight Surgeon/Medical Officer.

3. I will actively participate in an organized recovery program i.e. Alcoholics Anonymous or equivalent. An equivalent approach must be sanctioned by my medical monitoring team, Flight Surgeon, Wing/Base Addiction Counsellor.

4. I will follow the recommendations made by the treatment facility and the Wing/Base Flight Surgeon, Wing/Base Addiction Counsellor.

5. I will attend scheduled assessment/treatment and counselling sessions at the discretion of the Flight Surgeon/MO and Wing/Base Addiction Counsellor not less than once per month for the first year, after treatment and for the second year at a frequency of not less than once every three months. Further follow up if deemed necessary and mutually agreeable can continue on an individual basis.

6. I understand that the conditions within this contract are non-negotiable to retain flying status. The above aspects of treatment are part of a total treatment package and will require my full cooperation and participation if I am to receive maximum benefit.

7. My signature indicates that I have read and understand the conditions. I am aware that should I either not wish to agree to the conditions or not follow the conditions that I will be grounded and awarded an air factor of A7.

| ____________________ | ____________________ | Date: ____________________ |
|---|---|---|
| Member’s Name (Scribe letters) | Member’s Signature | |

| ____________________ | ____________________ | Date: ____________________ |
|---|---|---|
| Witness Name (Scribe letters) | Witness’s Signature | |

**Annex E**
**To Guidelines for the Management**
**Of Alcohol Related Disorders in Aircrew**

LIST OF SUGGESTED PROVIDERS OF PHASE II SERVICES

Ref: Annex A to 1920-1 (ADM(Per)) dated March 1996

1. Atlantic Provinces

   a. Canadian forces Addiction Rehabilitation Centre
      Canadian Forces Base Halifax
      FMO Halifax NS B0X 1A3
      (902) 427-0550 Local 8606

2. Quebec – Francophone

   a. Maison Jean Lapointe
      111, rue Normand
      Montréal QC H2Y 2K6
      (514) 288-2611
      Fax: (514) 288-2910
      Executive Director: Mr. Rodrigue Paré
      Cost: $2700.00 for 28-day program

   b. Pavillon Jellinek
      25, rue St-François
      Hull QC J9A 1B1
      (819) 776-5584
      Fax: (819) 776-0255
      Director: Mr. Guy Carle
      Cost: $3000.00 for six-week program

3. Québec – Anglophone

   a. Pavillon foster
      Montréal QC
      (514) 859-8911
      Director: Mr. M. Kokin
      Cost: $200.00/patient/day

b. La Maisonnée de Laval
8255, boul. Des Laurentides
Auteuil, Laval QC H7H 1T2
(514) 628-1011
Director: Mme. Paulette Gulnois
Cost: $2130.00 for three-week program

4. Ontario

a. Bellwood Health Services Inc.
1020 NcNicoll Avenue
Scarborough ON M1W 2J6
(416) 495-0926
Fax: (416) 495-7943
Director: M. Linda Bell
Cost: $320.0 /patient/day and $340.00/ patient/day if family program needed

b. Meadow Creek – Royal Ottawa Hospital Addiction Services
1145 Carling Avenue
Ottawa ON K1Z 7K4
(613) 722-6521
Fax: (613) 722-5048
Director: Jo-Anne Morisset
Cost: $3200.00 per four-week program ($115.00/patient/day)

c. Homewood Drug and Alcohol Service
Homewood Health Centre
150 Delhi Street
Guelph ON N1E 6K9
(519) 824-1827
Fax: (519) 824-1827
Director: Dr. G. Cunningham
Cost: $220.00/patient/day

5. Manitoba and Saskatchewan

    a. Addiction Foundation of Manitoba
    Men's Residential Unit
    Womens Centre for Substance Abuse
    Winnipeg MB
    (204) 944-6200/6229
    Director: Ms. Roberta Coulter
    Cost: $175.00 /patient/day

6. Alberta and Saskatchewan

    a. Henwood Treatment Centre
    Alberta Alcohol and Drug Abuse Commission
    18750 – 18 Street
    Edmonton AB T5B 4K3
    (403) 422-9069
    Fax: (403) 422-5408
    Director: Mr. Brian Kearne
    Cost: $150.00/patient/day

    b. Northern Addictions Centre
    Alberta Alcohol and Drug Abuse Commission
    11333 – 106 Street
    Grande Prairie AB T8V 6T7
    (403) 538-5210
    Fax: (403) 538-6359
    Director: Mr. David Nesbitt
    Cost: $150.00/patient/day

7. British Columbia

    a. Pacifica Treatment Centre
    1755 east 11 Avenue
    Vancouver BC V5N 1V0
    (604) 872-5517
    Fax: (604) 872-3554
    Director: Dr. Pauline M. Grey, PhD
    Cost: $125.00/patient/day

LIST OF USEFUL REFERENCES – AVIATION EFFECTS & DIAGNOSIS

1. Alcohol as a Flight Hazard
   Aeromedical & Training Digest Vol 5 – Issue 4 Oct 1991
   Dr. Kenneth E. Money, PhD

2. Identification and Management of Alcohol Dependence in Family Medicine
   The Canadian Journal of Diagnosis Sept 1997 Supplement
   Dr. Lynn Wilson and Dr. Meldon Kahan

3. Drinking and Flying – The Problem of Alcohol Use by Pilots
   New England Journal of Medicine August 16, 1990
   J.G. Modell, M.D. and J.M. Mountz, M.D., PhD

4. Alcohol, Aviation and Safety Revisited – A Historical Review and a Suggestion
   Aviation, Space and Environmental Medicine July 1988
   H.L. Gibbons, M.D., D.PH.

5. Effects of Ethyl Alcohol on Pilot Performance
   Aerospace Medicine April 1973
   C.E. Billings, R.L. Wich, R.J. Geike, R.C. Chase

6. Alcohol in Aviation Related Fatalities: North Carolina 1985 – 1994
   Aviation Space and Environmental Medicine Vol 69 No 8 August 1998
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