# CAR MED

# AEROMEDICAL REGULATIONS

**FOREWORD**

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## FOREWORD

1. The Civil Aviation Authority Bahamas is known in these regulations as the "Authority". The regulations are made under the Civil Aviation Authority Act - 2021.

2. CAR MED addresses medical requirements for flight crew, cabin crew and Air Traffic Controllers.

3. CAR MED includes Standards and Recommended Practices up to and including ICAO Annex 1, Amendment 178.

4. The Authority has adopted associated compliance or interpretative material wherever possible in Section 2 and, unless specifically stated otherwise, clarification will be based on this material or other internationally acceptable documentation.

5. Unless otherwise stated, applicable CAR DEF definitions and abbreviations are used throughout this document.

6. The editing practices used in this document are as follows:

   (a) 'Shall' is used to indicate a mandatory requirement.

   (b) 'Should' is used to indicate a recommendation.

   (c) 'May' is used to indicate discretion by the Authority, the industry or the applicant, as appropriate.

   (d) 'Will' indicates a mandatory requirement.

   *Note: The use of the male gender implies all genders.*

7. Paragraphs and sub-paragraphs with new, amended and corrected text will be enclosed within square brackets until a subsequent amendment is issued.

8. Section 1 regulations are presented in "Times Roman" font and Section 2 guidance material is presented in "Arial" font.

The Director General, in exercise of the powers conferred by Section 17(1) of the Civil Aviation Authority Bahamas Act, 2021 (No. 2 of 2021) hereby issues the following amended regulation.

**Issued the 21st day of June 2024**

Alexander B. Ferguson

**DIRECTOR GENERAL**
**CIVIL AVIATION AUTHORITY BAHAMAS**

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## REVISION RECORD

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**SECTION 2 ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL**

# CHAPTER 1

# GENERAL REQUIREMENTS

## Section 1

## General

### 1.005 Competent authority

For the purpose of these regulations, the Authority shall be responsible for approved;

(a) aero-medical centres (AeMC) located in The Bahamas;

(b) aero-medical examiners (AME), whose principal place of practice is located in The Bahamas; and

(c) aero-medical examiners (AME), whose principal place of practice is located outside The Bahamas.

### 1.010 Reciprocal recognition

The Authority may recognize, as meeting these regulations, medical certificates issued, and medical assessments performed, by foreign aero-medical centres (AeMC) and designated aero-medical examiners (AME) for an applicant for a licence that requires a medical certificate or renewal of that licence.

*Note: The Authority shall recognize a Class 1 medical certificate conducted above as meeting the requirements of a Class 2 or Class 3 medical assessment.*

### 1.015 Scope

These regulations establish the requirements for:

(a) the issue, validity, revalidation and renewal of the medical certificate required for exercising the privileges of a pilot licence, of a student pilot licence, or of a Flight Engineer licence;

(b) the issue, validity, revalidation and renewal of the medical certificate required for exercising the privileges of an Air Traffic Controller licence or of a student Air Traffic Controller licence;

(c) the issue, validity, revalidation and renewal of the medical certificate required for exercising the privileges of a cabin crew member; and

(d) the certification of AMEs.

### 1.020 Classes of medical assessments

The Authorities issues three classes of Medical Assessment as follows:

(a) Class 1 Medical Assessment applies to applicants for, and holders of:

— commercial pilot licences — aeroplane, airship, helicopter and powered-lift

— multi-crew pilot licences — aeroplane

— airline transport pilot licences — aeroplane, helicopter and powered-lift

— remote pilot licences

*Note: A Class 1 medical assessment may be essential for a particular remote pilot based on their work environment and responsibilities in the context of a specific RPAS application.*

(b) Class 2 Medical Assessment applies to applicants for, and holders of:

— flight engineer licences

— student pilot licences

— private pilot licences — aeroplane, airship, helicopter and powered-lift

— glider pilot licences

— free balloon pilot licences

— cabin crew licences

*Note: A Class 2 medical does not apply to a cabin crew member holding an attestation from an ICAO Contracting State provided that cabin crew member holds a medical certificate or report to a standard acceptable to the Authority*

— remote pilot licences for normal RPAS applications - see note above

(c) Class 3 Medical Assessment applies to applicants for, and holders of;

— air traffic controller licences

— student air traffic controller licences

**1.025 Definitions**

For the purpose of these regulations, the following definitions apply in addition to those in CAR DEF:

– ‘Assessment’ means the conclusion on the medical fitness of a person based on the evaluation of the person’s medical history and/or aero-medical examinations as required in these regulations and further examinations as necessary, and/or medical tests such as, but not limited to, ECG, blood pressure measurement, blood testing, X-ray.

– ‘Colour safe’ means the ability of an applicant to readily distinguish the colours used in air navigation and correctly identify aviation coloured lights.

– ‘Eye specialist’ means an ophthalmologist or a vision care specialist qualified in optometry and trained to recognise pathological conditions.

– ‘Examination’ means an inspection, palpation, percussion, auscultation or other means of investigation especially for diagnosing disease.

– ‘Investigation’ means the assessment of a suspected pathological condition of an applicant by means

of examinations and tests in order to verify the presence or absence of a medical condition.

— 'Limitation' means a condition placed on the medical certificate, licence.

— 'Refractive error' means the deviation from emmetropia measured in dioptres in the most ametropic meridian, measured by standard methods.

**1.030 Medical confidentiality**

(a) [Applicants for an AME designation, with the privileges for the initial issue, revalidation and renewal of medical certificates shall demonstrate to the Authority that they have in place the necessary procedures and conditions to ensure medical confidentiality.

(b) To ensure medical confidentiality, all medical reports and records should be securely held with accessibility restricted to personnel authorised by the medical assessor.

(c) All persons involved in medical examination, assessment and certification shall ensure that medical confidentiality is respected at all times.

(d) The AME, as a representative of the CAA-B should treat the applicant's medical certification information in accordance with the requirements of these regulation.

(e) Except in compliance with an order of a court of competent jurisdiction, or upon an applicant's written request, AMEs will not divulge, or release copies of any reports prepared in connection with the examination to anyone other than the applicant or the CAA-B medical assessor.

(f) The CAA-B AME shall not disclose or release medical information to any other person except:

(1) As may be required in connection with the administration of, or any proceedings under this Act and the regulations (during litigation of matters related to certification)

(2) To his counsel and attorney; or

(3) With the consent of the person to whom the information relates. (Written permission from the individual to whom it applies, or, with the individual's knowledge)

(g) The CAA-B may, however, on request, from Aircraft Accident Investigation Authority (AAIA) disclose the fact that an individual holds an airman medical certificate, validity and its class, regarding a pilot involved in an accident for use in aircraft accident investigation.

(h) Whenever a court order or subpoena is received by the AME, the CAA-B medical assessor should be contacted in order to ensure proper release of information. Similarly, unless the applicant's written consent for release is routine in nature (e.g., accompanying a standard insurance company request), the CAA-B must be contacted before releasing any information. In all cases, copies of all released information should be retained.]

**1.035 Decrease in medical fitness**

(a) Licence holders shall not exercise the privileges of their licence and related ratings at any time when they:

(1) are aware of any decrease in their medical fitness which might render them unable to safely exercise those privileges;

(2) take or use any prescribed or non-prescribed medication which is likely to interfere with the safe exercise of the privileges of the applicable licence;

(3) receive any medical, surgical or other treatment that is likely to interfere with flight safety.

(b) In addition, licence holders shall, without undue delay, seek aero-medical advice when they:

(1) have undergone a surgical operation or invasive procedure;

(2) have commenced the regular use of any medication;

(3) have suffered any significant personal injury involving incapacity to function as a member of the flight crew;

(4) have been suffering from any significant illness involving incapacity to function as a member of the flight crew;

(5) are pregnant;

(6) have been admitted to hospital or medical clinic;

(7) first require correcting lenses.

(c) In these cases, holders of Class 1, Class 2 and Class 3 medical certificates shall seek the advice of an AeMC or AME. The AeMC or AME shall assess the medical fitness of the licence holder and decide whether they are fit to resume the exercise of their privileges;

**1.040 Designation of medical examiners**

(a) The Authority shall designate medical examiners, qualified and licensed in the practice of medicine, to conduct medical examinations of fitness of applicants for the issue or renewal of the licences or ratings.

(b) The Authority shall use the services of medical assessors to evaluate reports submitted by medical examiners.

**1.045 Obligations of AeMC and AME**

(a) When conducting medical examinations and/or assessments, AeMC or AME, shall;

(1) ensure that communication with the person can be established without language barriers;

(2) make the person aware of the consequences of providing incomplete, inaccurate or false statements on their medical history.

(b) After completion of the aero-medical examinations and/or assessment, the AeMC or AME shall:

(1) advise the person whether fit, unfit or referred to the Authority, AeMC or AME as

applicable;

(2) inform the person of any limitation that may restrict flight training or the privileges of the licence;

(3) if the person has been assessed as unfit, inform him/her of his/her right of a secondary review; and

(4) in the case of applicants for a medical certificate, submit without delay a signed, or electronically authenticated, report to include the assessment result and a copy of the medical certificate to the Authority.

(c) AeMCs or AMEs shall maintain records with details of medical examinations and assessments performed in accordance with these regulations and their results in accordance with national legislation.

(d) When required for medical certification and/or oversight functions, AeMCs or AMEs shall submit to the medical assessor of the Authority upon request all aero-medical records and reports, and any other relevant information.

(e) Having completed the medical examination of the applicant in accordance with these regulations, the medical examiner shall coordinate the results of the examination and submit a signed report, or equivalent, to the Authority, in accordance with its requirements, detailing the results of the examination and evaluating the findings with regard to medical fitness.

(f) If the medical report is submitted to the Authority in electronic format, adequate identification of the examiner shall be established.

(g) If the medical examination is carried out by two or more medical examiners, the Authority shall appoint one of these to be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

(h) The medical examiner shall be required to submit sufficient information to the Authority to enable it to undertake Medical Assessment audits.

(i) When justified by operational considerations, the medical assessor shall determine to what extent pertinent medical information is presented to Authority.

(j) In accordance with Chapter 3, medical examiners shall have received training in aviation medicine and shall receive refresher training at regular intervals.

(k) Before designation, medical examiners shall demonstrate adequate competency in aviation medicine.

(l) Any false declaration to a medical examiner made by an applicant for a licence or rating shall be reported to the Authority for such action as may be considered appropriate.

## 1.050 Obligations of applicants for medical certificate

Applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiner a declaration stating whether they have previously undergone such an examination and, if so, the date, place and result of the last examination. They shall indicate to the examiner whether a

Medical Assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

### 1.055 Deferment

The prescribed re-examination of a licence holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the Authority, provided that such deferment shall only be made as an exception and shall not exceed;

(a) a single period of six months in the case of a flight crew member of an aircraft engaged in non-commercial operations;

(b) two consecutive periods each of three months in the case of a flight crew member of an aircraft engaged in commercial operations provided that in each case a favourable medical report is obtained after examination by a designated medical examiner of the area concerned, or, in cases where such a designated medical examiner is not available, by a physician legally qualified to practise medicine in that area. A report of the medical examination shall be sent to the Authority;

(c) in the case of a private pilot, a single period not exceeding 24 months where the medical examination is carried out by an examiner designated by the Contracting State in which the applicant is temporarily located. A report of the medical examination shall be sent to the Authority where the licence was issued.

(d) two consecutive periods each of three months in the case of a remote flight crew member.

## Section 2

## Requirements for medical certificates

### 1.060 Medical certificates

(a) A student pilot shall not fly solo unless that student pilot holds a Class 1 or Class 2 medical certificate, as required for the relevant licence.

(b) Applicants for and holders of an Air Traffic Controller licence or student Air Traffic Controller licence shall hold at least a Class 3 medical certificate.

(c) Applicants for and holders of a private pilot licence (PPL), a sailplane pilot licence (SPL), a balloon pilot licence (BPL) shall hold at least a Class 2 medical certificate.

(d) Applicants for and holders of an SPL or a BPL involved in commercial sailplane or balloon flights shall hold at least a Class 2 medical certificate.

(e) If a night rating is added to a PPL, the licence holder shall be colour safe.

(f) Applicants for and holders of a commercial pilot licence (CPL), a multi-crew pilot licence (MPL), or an airline transport pilot licence (ATPL) shall hold a Class 1 medical certificate.

(g) Applicants for and holders of a flight engineer licence shall hold a Class 2 medical certificate.

(h) Applicants for and holders of a cabin crew licence shall hold a Class 2 medical certificate.

*Note: A Class 2 medical does not apply to a cabin crew member holding an attestation from an ICAO Contracting State provided that cabin crew member holds a medical certificate or report to a standard acceptable to the Authority*

(i) If an instrument rating is added to a PPL, the licence holder shall undertake pure tone audiometry examinations in accordance with the periodicity and the standard required for Class 1 medical certificate holders.

(j) Applicants for and holders of a remote pilot licence (RPL) shall hold a Class 2 medical certificate.

(k) A licence holder shall not at any time hold more than one medical certificate issued in accordance with these regulations.

### 1.065 Application for a medical certificate

(a) Applications for a medical certificate shall be made in a format established by the Authority.

(b) Applicants for a medical certificate shall provide the AeMC or AME, with:

(1) proof of their identity;

(2) a signed declaration:

(i) of medical facts concerning their familial and hereditary medical history;

(ii) as to whether they have previously undergone an examination for a medical certificate and, if so, by whom and with what result;

(iii) as to whether they have ever been assessed as unfit or had a medical certificate suspended or revoked.

(c) When applying for a revalidation or renewal of the medical certificate, applicants shall present the medical certificate to the AeMC or AME prior to the relevant examinations.

(d) [was deleted]

**[1.066 False declaration**

(a) The applicant for the issue, revalidation or renewal of licences and associated ratings and certificates shall be made aware of the necessity for giving a statement that is as complete and accurate as the applicant's knowledge permits.

(b) When conducting medical examinations and/or assessments, an AME shall make the person aware of the consequences of providing incomplete, inaccurate, or false statements on their medical history, as indicated on the medical application form.

(c) Any false declaration to a medical examiner made by an applicant for a licence, certificate, authorisation or rating shall be reported in writing, via email, to the Civil Aviation Authority Bahamas (CAA-B) medical assessor, within two (2) business days, for such action to be taken as may be considered appropriate.

(d) A person commits an offence if he, with intent to deceive, or commit knowingly without intent to deceive, makes any false representation for the purpose of procuring for himself or any other person the grant, issue, renewal or variation of any such certificate, licence, approval, permission or exemption or other document, including a copy, or purported copy, or electronic copy.

(e) A person who commits an offence under this section is liable on conviction to a fine not exceeding five thousand dollars, or imprisonment for a term not exceeding six months, or to both fine and imprisonment.

(f) The Director General may, in writing, where he considers it necessary in the interests of civil aviation safety and security, require the investigation of the holder of an aviation document where he has reasonable grounds to believe that the holder thereof has failed to comply with any conditions of his aviation document or with the requirements of CARs.

(g) If the Director General requires the holder of an aviation document to be investigated, the Director General:

(1) shall inform the holder thereof, in writing, of the date on which the investigation will commence;
(2) shall conclude the investigation as soon as practicable;
(3) may make available the results of the investigation to the document holder;
(4) make recommendations arising out of the investigation; and
(5) provide the grounds for any recommendations made.

(h) The Director General may take action to enforce the regulations that have been contravened, including but not limited to:

(1) assessing an administrative penalty or civil penalty for contravention of any operating regulation; or

(2) referring the offence to the appropriate court.

(i) A person may appeal, within twenty-eight days of being notified, to the Director General against an administrative or civil penalty.

(ii) A person may appeal to the Supreme Court from any administrative or civil penalty imposed by the Director General provided an appeal is first lodged with the CAA- B.]

**1.070 Issue, revalidation and renewal of medical certificates**

(a) A medical certificate shall only be issued, revalidated or renewed once the required medical examinations and/or assessments have been completed and a fit assessment is made.

(b) Initial issue:

(1) Class 1, Class 2 or Class 3 medical certificates shall be issued by an AeMC or an AME.

(c) Revalidation and renewal:

(1) Class 1, Class 2 or Class 3 medical certificates shall be revalidated or renewed by an AeMC or an AME.

(d) The AeMC or AME shall only issue, revalidate or renew a medical certificate if:

(1) the applicant has provided them with a complete medical history and, if required by the AeMC or AME, results of medical examinations and tests conducted by the applicant's doctor or any medical specialists; and

(2) the AeMC or AME have conducted the aero-medical assessment based on the medical examinations and tests as required for the relevant medical certificate to verify that the applicant complies with all the relevant requirements of these regulations.

(e) The AME, AeMC or, in the case of referral, the Authority may require the applicant to undergo additional medical examinations and investigations when clinically indicated before they issue, revalidate or renew a medical certificate.

[was deleted]

**1.075 Validity, revalidation and renewal of medical certificates**

The level of medical fitness to be met for the renewal of a Medical Assessment shall be the same as that for the initial assessment except where otherwise specifically stated in these regulations. The period of validity of a Medical Assessment, as stated below, may be reduced when clinically indicated.

(a) Validity

(1) Class 1 medical certificates shall be valid for a period of 12 months.

(2) The period of validity of Class 1 medical certificates shall be reduced to 6 months for licence holders who:

(i) are engaged in single-pilot commercial air transport operations carrying passengers and have reached the age of 40;

(ii) have reached the age of 60.

(3) Class 2 medical certificates for flight crew shall be valid for a period of;

(i) 60 months until the licence holder reaches the age of 40. A medical certificate issued prior to reaching the age of 40 shall cease to be valid after the licence holder reaches the age of 42;

(ii) 24 months between the age of 40 and 50. A medical certificate issued prior to reaching the age of 50 shall cease to be valid after the licence holder reaches the age of 51; and

(iii) 12 months after the age of 50.

(4) Class 2 medical certificates for cabin crew shall be valid for a period of;

(i) 24 months for cabin crew regardless of age.

(5) Class 3 medical certificates shall be valid for a period of;

(i) 48 months until the licence holder reaches the age of 40. A medical certificate issued prior to reaching the age of 40 shall cease to be valid after the licence holder reaches the age of 41;

(ii) 24 months after the age of 40; and

(iii) 12 months after the age of 50.

(6) The validity period of a medical certificate, including any associated examination or special investigation, shall be:

(i) determined by the age of the applicant at the date when the medical examination takes place; and

(ii) calculated from the date of the medical examination in the case of initial issue and renewal, and from the expiry date of the previous medical certificate in the case of revalidation.

(b) Revalidation

Examinations and/or assessments for the revalidation of a medical certificate may be undertaken up to 45 days prior to the expiry date of the medical certificate.

(c) Renewal

(1) If the holder of a medical certificate does not comply with (b), a renewal examination and/or assessment shall be required.

(2) If the medical certificate has expired for:

(i) less than 2 years, a routine revalidation aero-medical examination shall be performed;

(ii) more than 2 years, the AeMC or AME shall only conduct the renewal examination after assessment of the aero-medical records of the applicant;

(iii) if the medical certificate has expired for more than 5 years, the examination requirements for initial issue shall apply and the assessment shall be based on the revalidation requirements.

(d) Extension

The period of validity of a Medical Assessment may be extended, at the discretion of the Authority, up to 45 days.

**1.080 Referral**

(a) If an applicant for a medical certificate is referred to the Authority in accordance with MED. 2.001, the AeMC or AME shall transfer the relevant medical documentation to the Authority.

**1.085 Medical certificate format**

The medical certificate shall conform to the following specifications:

(a) Content

(1) State where the licence has been issued or applied for (I),

(2) Class of medical certificate (II),

(3) Certificate number commencing with the UN country code of The Bahamas (BHS) and followed by a code of numbers and/or letters in Arabic numerals and Latin script (III),

(4) Name of holder (IV),

(5) Nationality of holder (VI),

(6) Date of birth of holder: (dd/mm/yyyy) (XIV),

(7) Signature of holder (VII)

(8) Limitation(s) (XIII)

(9) Expiry date of the medical certificate (IX)

(10) Date of medical examination

(11) Date of last electrocardiogram

(12) Date of last audiogram

(13) Date of issue and signature of the AME or medical assessor that issued the certificate (X).

(14) Seal or stamp (XI)

(15) Material: The paper or other material used shall prevent or readily show any alterations or erasures. Any entries or deletions to the form shall be clearly authorised by the Authority.

(b) Language: Licences shall be written in the English language.

(c) All dates on the medical certificate shall be written in a dd/mm/yyyy format.

**MED 1.090 Assessment Appeal**

(a) Where an applicant for a medical certificate has had the certificate denied, or a limitation placed on the certificate, which adversely affects the applicant, he/she may apply to the Authority within twenty-eight days to appeal the medical examiner's decision.

(b) An investigation will be conducted by an appointed Medical Assessor on behalf of the Authority and a decision would be made either to reverse the previous decision, or to accept the previous decision, or to amend any certificate.

(c) The Authority should then notify the applicant of the decision within 7 days.

# CHAPTER 2

# REQUIREMENTS FOR MEDICAL CERTIFICATES

## Section 1

## General

### 2.001 Limitations to medical certificates

(a) Limitations to medical certificates

(1) If the applicant does not fully comply with the requirements for the relevant class of medical certificate but is considered to be not likely to jeopardise flight safety, the AeMC or AME shall:

(i) in the case of applicants for a Class 1 medical certificate, refer the decision on fitness of the applicant to the Authority as indicated in this Chapter ;

(ii) in cases where a referral to the Authority is not indicated in this Chapter , evaluate whether the applicant is able to perform his/her duties safely when complying with one or more limitations endorsed on the medical certificate, and issue the medical certificate with limitation(s) as necessary;

(iii) in the case of applicants for a Class 2 or Class 3 medical certificate, evaluate whether the applicant is able to perform his/her duties safely when complying with one or more limitations endorsed on the medical certificate, and issue the medical certificate, as necessary with limitation(s), in consultation with the Authority;

(iv) The AeMC or AME may revalidate or renew a medical certificate with the same limitation without referring the applicant to the Authority.

(b) When assessing whether a limitation is necessary, particular consideration shall be given to:

(1) whether accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence is not likely to jeopardise the safe exercise of the privileges of the licence;

(2) the applicant's ability, skill and experience relevant to the operation to be performed.

(c) Operational limitation codes

(1) Operational multi-pilot limitation (OML — Class 1 only)

(i) When the holder of a CPL, ATPL or MPL does not fully meet the requirements for a Class 1 medical certificate and has been referred to the Authority, it shall be assessed whether the medical certificate may be issued with an OML 'valid only as or with qualified co-pilot'. This assessment shall be performed by the Authority.

(ii) The holder of a medical certificate with an OML shall only operate an aircraft in multi-pilot operations when the other pilot is fully qualified on the relevant type of aircraft, is not subject to an OML and has not attained the age of 60 years.

(iii) The OML for Class 1 medical certificates may only be imposed and removed by the Authority.

(2) Operational Safety Pilot Limitation (OSL — Class 2 privileges)

(i) The holder of a medical certificate with an OSL limitation shall only operate an aircraft if another pilot fully qualified to act as pilot-in-command on the relevant class or type of aircraft is carried on board, the aircraft is fitted with dual controls and the other pilot occupies a seat at the controls.

(ii) The OSL for Class 2 medical certificates may be imposed or removed by an AeMC or AME in consultation with the Authority.

(3) Operational Passenger Limitation (OPL — Class 2 flight crew privileges)

(i) The holder of a medical certificate with an OPL limitation shall only operate an aircraft without passengers on board.

(ii) An OPL for Class 2 medical certificates may be imposed by an AeMC or AME in consultation with the Authority.

(4) Operational limitations (OPL — Class 2 cabin crew privileges)

(i) The Authority, in conjunction with the aircraft operator, shall determine the operational limitations applicable in the specific operational environment concerned.

(ii) Appropriate operational limitations shall only be placed on the medical certificate by the licensing authority.

(5) Operational limitations (OPL — Class 3 privileges)

(i) The Authority, in conjunction with the air navigation service provider, shall determine the operational limitations applicable in the specific operational environment concerned.

(ii) Appropriate operational limitations shall only be placed on the medical certificate by the licensing authority.

(d) Any other limitation may be imposed on the holder of a medical certificate if required to ensure flight safety.

(e) Any limitation imposed on the holder of a medical certificate shall be specified therein.

## Section 2

## Medical requirements for medical certificates

### 2.005 General

(a) Applicants for a medical certificate shall be free from any:

(1) abnormality, congenital or acquired;

(2) active, latent, acute or chronic disease or disability;

(3) wound, injury or sequelae from operation;

(4) effect or side effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken;.

(b) In cases where the decision on medical fitness of an applicant for a medical certificate is referred to the Authority, this authority may delegate such a decision to an AME, except in cases where a limitation is needed.

### 2.010 Cardiovascular System

(a) Examination

(1) A standard 12-lead resting electrocardiogram (ECG) and report shall be completed on clinical indication, and:

(i) for a Class 1 medical certificate, at the examination for the first issue of a medical certificate, then every 5 years until age 30, every 2 years until age 40, annually until age 50, and at all revalidation or renewal examinations thereafter;

(ii) for a Class 2 medical certificate, at the first examination after age 40 and then every 2 years after age 50.

(iii) for a Class 3 medical certificate, at the examination for the first issue of a medical certificate, then every 4 years until age 30, and at all revalidation or renewal examinations thereafter;

(2) Extended cardiovascular assessment shall be required when clinically indicated.

(3) For all medical certificates, an extended cardiovascular assessment shall be completed at the first revalidation or renewal examination after age 65 and every 4 years thereafter.

(4) For all medical certificates, estimation of serum lipids, including cholesterol, shall be required at the examination for the first issue of a medical certificate, and at the first examination after having reached the age of 40.

(b) Cardiovascular System — General

(1) Applicants shall not suffer from any cardiovascular disorder which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(2) Applicants for a Class 1 or Class 3 medical certificate with any of the following conditions shall be assessed as unfit:

(i) aneurysm of the thoracic or supra-renal abdominal aorta, before or after surgery;

(ii) significant functional abnormality of any of the heart valves;

(iii) heart or heart/lung transplantation.

(3) Applicants for a Class 1 or Class 3 medical certificate with an established history or diagnosis of any of the following conditions shall be referred to the Authority before a fit assessment may be considered:

(i) peripheral arterial disease before or after surgery;

(ii) aneurysm of the abdominal aorta, after surgery;

(iii) aneurysm of the infra-renal abdominal aorta after surgery;

(iv) functionally insignificant cardiac valvular abnormalities;

(v) after cardiac valve surgery;

(vi) abnormality of the pericardium, myocardium or endocardium;

(vii) congenital abnormality of the heart, before or after corrective surgery;

(viii) recurrent vasovagal syncope;

(ix) arterial or venous thrombosis;

(x) pulmonary embolism;

(xi) cardiovascular condition requiring systemic anticoagulant therapy.

(4) Applicants for a Class 2 medical certificate with an established diagnosis of one of the conditions specified in (2) and (3) above shall be assessed by a cardiologist before a fit assessment can be considered in consultation with the Authority.

(c) Blood Pressure

(1) The blood pressure shall be recorded at each examination.

(2) The applicant's blood pressure shall be within normal limits.

(3) Applicants for a Class 1 or Class 3 medical certificate shall be assessed as unfit:

(i) They have symptomatic hypotension; or

(ii) When their blood pressure at examination consistently exceeds 150 mmHg systolic and/or 95 mmHg diastolic, with or without treatment;

.

(4) The initiation of medication for the control of blood pressure shall require a period of temporary suspension of the medical certificate to establish the absence of significant side effects.

(d) Coronary Artery Disease

(1) Applicants for all medical certificates with the following conditions shall be assessed as unfit:

(i) symptomatic coronary artery disease;

(ii) symptoms of coronary artery disease controlled by medication;

(2) Applicants for all medical certificates with any of the conditions detailed in (1) shall undergo cardiological evaluation before a fit assessment can be considered.

(3) Applicants with any of the following conditions shall be assessed as unfit:

(i) suspected myocardial ischaemia;

(ii) asymptomatic minor coronary artery disease controlled by medication;

(4) Applicants for the initial issue of a Class 1 or Class 3 medical certificate with a history or diagnosis of any of the following conditions shall be assessed as unfit:

(i) myocardial ischaemia;

(ii) myocardial infarction;

(iii) revascularisation for coronary artery disease.

(5) Applicants for a Class 2 medical certificate who are asymptomatic following myocardial infarction or surgery for coronary artery disease shall undergo satisfactory cardiological evaluation before a fit assessment can be considered in consultation with the Authority. Applicants for the revalidation of a Class 1 or Class 3 medical certificate shall be referred to the Authority.

(e) Rhythm/Conduction Disturbances

(1) Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority when they have any significant disturbance of cardiac conduction or rhythm, intermittent or established, including any of the following:

(i) disturbance of supraventricular rhythm, including intermittent or established sinoatrial dysfunction, atrial fibrillation and/or flutter and asymptomatic sinus pauses;

(ii) complete left bundle branch block;

(iii) Mobitz type 2 atrioventricular block;

(iv) broad and/or narrow complex tachycardia;

(v) ventricular pre-excitation;

(vi) asymptomatic QT prolongation;

(vii) Brugada pattern on electrocardiography.

(2) Applicants for a Class 2 medical certificate with any of the conditions detailed in (1) shall undergo satisfactory cardiological evaluation before a fit assessment in consultation with the Authority can be considered.

(3) Applicants with any of the following:

(i) incomplete bundle branch block;

(ii) complete right bundle branch block;

(iii) stable left axis deviation;

(iv) asymptomatic sinus bradycardia;

(v) asymptomatic sinus tachycardia;

(vi) asymptomatic isolated uniform supra-ventricular or ventricular ectopic complexes;

(vii) first degree atrioventricular block;

(viii) Mobitz type 1 atrioventricular block;

may be assessed as fit in the absence of any other abnormality and subject to satisfactory cardiological evaluation.

(4) Applicants with a history of:

(i) ablation therapy;

(ii) pacemaker implantation;

shall undergo satisfactory cardiovascular evaluation before a fit assessment can be considered. Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority. Applicants for a Class 2 medical certificate may be assessed as fit in the absence of any other abnormality and subject to satisfactory cardiological evaluation.

(5) Applicants with any of the following conditions shall be assessed as unfit:

(i) symptomatic sinoatrial disease;

(ii) complete atrioventricular block;

(iii) symptomatic QT prolongation;

(iv) an automatic implantable defibrillating system;

(v) a ventricular anti-tachycardia pacemaker.

## 2.015 Respiratory System

(a) Applicants with significant impairment of pulmonary function shall be assessed as unfit. A fit assessment may be considered once pulmonary function has recovered and is satisfactory.

(b) For a Class 1 and Class 3 medical certificate, applicants are required to undertake pulmonary function tests at the initial examination and on clinical indication.

(c) For a Class 2 medical certificate, applicants are required to undertake pulmonary function tests on clinical indication.

(d) Applicants with a history or established diagnosis of the following:

(1) active inflammatory disease of the respiratory system;

(2) active sarcoidosis;

(3) pneumothorax;

(4) sleep apnoea syndrome;

(5) major thoracic surgery;

(6) chronic obstructive pulmonary disease;

(7) lung transplantation.

shall undergo respiratory evaluation with a satisfactory result before a fit assessment can be considered. Applicants with an established diagnosis of the conditions above shall undergo satisfactory cardiological evaluation before a fit assessment can be considered.

## 2.020 Digestive System

(a) Applicants shall not possess any functional or structural disease of the gastro-intestinal tract or its adnexa which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Applicants with any sequelae of disease or surgical intervention in any part of the digestive tract or its adnexa likely to cause incapacitation, in particular any obstruction due to stricture or compression shall be assessed as unfit.

(c) Applicants shall be free from herniae that might give rise to incapacitating symptoms.

(d) Applicants with disorders of the gastro-intestinal system including:

(1) recurrent dyspeptic disorder requiring medication;

(2) pancreatitis;

(3) symptomatic gallstones;

(4) an established diagnosis or history of chronic inflammatory bowel disease;

(5) after surgical operation on the digestive tract or its adnexa, including surgery involving total or partial excision or a diversion of any of these organs;

shall be assessed as unfit. A fit assessment may be considered after successful treatment or full recovery after surgery and subject to satisfactory gastroenterological evaluation.

(e) Aero-medical assessment:

(1) applicants for a Class 1 or Class 3 medical certificate with the diagnosis of the conditions specified above shall be referred to the Authority;

(2) fitness of Class 2 applicants with pancreatitis shall be assessed in consultation with the Authority.

**2.025 Metabolic and Endocrine Systems**

(a) Applicants shall not possess any functional or structural metabolic, nutritional or endocrine disorder which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit subject to demonstrated stability of the condition and satisfactory aero-medical evaluation.

(c) Diabetes mellitus

(1) Applicants with diabetes mellitus requiring insulin shall be assessed as unfit.

(2) Applicants with diabetes mellitus not requiring insulin shall be assessed as unfit unless it can be demonstrated that blood sugar control has been achieved (i.e. HBA1C of $\leq$ 9%).

(d) Aero-medical assessment:

(1) applicants for a Class 1 or Class 3 medical certificate requiring medication other than insulin for blood sugar control shall be referred to the Authority;

(2) fitness of Class 2 applicants requiring medication other than insulin for blood sugar control shall be assessed in consultation with the Authority.

**2.030 Haematology**

(a) Applicants shall not possess any haematological disease which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) For all medical certificates, haemoglobin shall be tested at each examination for the issue of a medical certificate.

(c) Applicants with a haematological condition, such as:

(1) coagulation, haemorragic or thrombotic disorder;

(2) chronic leukaemia;

(3) abnormal haemoglobin, including but not limited to anaemia, erythrocytosis or

haemoglobinopathy;

(4) significant lymphatic enlargement;

(5) enlargement of the spleen;

may be assessed as fit subject to satisfactory aeromedical evaluation.

(d) Aero-medical assessment:

(1) applicants for a Class 1 or Class 3 medical certificate with one of the conditions specified in (c) above shall be referred to the Authority;

(2) fitness of Class 2 applicants with one of the conditions specified in (c) above shall be assessed in consultation with the Authority.

(e) Applicants suffering from acute leukaemia shall be assessed as unfit.

(1) enlargement of the spleen.

**2.035 Genitourinary System**

(a) Applicants shall not possess any functional or structural disease of the renal or genito-urinary system or its adnexa which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Urinalysis shall form part of every aero-medical examination. The urine shall contain no abnormal element considered to be of pathological significance.

(c) Applicants with any sequela of disease or surgical procedures on the kidneys or the urinary tract likely to cause incapacitation, in particular any obstruction due to stricture or compression shall be assessed as unfit.

(d) Applicants with a genitourinary disorder, such as:

(1) renal disease;

(2) one or more urinary calculi, or a history of renal colic;

may be assessed as fit subject to satisfactory renal/urological evaluation.

(e) Applicants who have undergone a major surgical operation in the urinary apparatus involving a total or partial excision or a diversion of its organs shall be assessed as unfit and be re-assessed after full recovery before a fit assessment can be considered. Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority for the re-assessment.

**2.040 Infectious Disease**

(a) Applicants shall have no established medical history or clinical diagnosis of any infectious disease which is likely to interfere with the safe exercise of the privileges of the applicable licence held.

(b) Applicants who are HIV positive shall be referred to the Authority and may be assessed as fit subject

to satisfactory specialist evaluation and provided the Authority has sufficient evidence that the therapy does not compromise the safe exercise of the privileges of the licence.

(c) Applicants diagnosed with or presenting symptoms of infectious disease such as:

(1) acute syphilis;

(2) active tuberculosis;

(3) infectious hepatitis;

(4) tropical diseases;

shall be referred to the Authority for an aero-medical assessment. A fit assessment may be considered after full recovery and specialist evaluation provided the Authority has sufficient evidence that the therapy does not compromise the safe exercise of the privileges of the licence.

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**2.045 Obstetrics and Gynaecology**

(a) Applicants shall not possess any functional or structural obstetric or gynaecological condition which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Applicants who have undergone a major gynaecological operation shall be assessed as unfit until full recovery.

(c) Pregnancy

(1) In the case of pregnancy, if the AeMC or AME considers that the licence holder is fit to exercise her privileges, he/she shall limit the validity period of the medical certificate to the end of the 26$^{th}$ week of gestation for holders of a Class 1 medical certificate and 34$^{th}$ week of gestation for holders of a Class 3 medical certificate. After this point, the certificate shall be suspended. The suspension shall be lifted after full recovery following the end of the pregnancy.

(2) Holders of Class 1 medical certificates shall only exercise the privileges of their licences until the 26$^{th}$ week of gestation with an OML. Notwithstanding MED. 2.001 in this case, the OML may be imposed and removed by the AeMC or AME.

**2.050 Musculoskeletal System**

(a) Applicants shall not possess any abnormality of the bones, joints, muscles or tendons, congenital or acquired which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) An applicant shall have sufficient sitting height, arm and leg length and muscular strength for the safe exercise of the privileges of the applicable licence(s).

(c) An applicant shall have satisfactory functional use of the musculoskeletal system to enable the safe exercise of the privileges of the applicable licence(s). Fitness of the applicants shall be assessed in consultation with the Authority.

**2.055 Psychiatry**

(a) Applicants shall have no established medical history or clinical diagnosis of any psychiatric disease or disability, condition or disorder, acute or chronic, congenital or acquired, which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Applicants with a mental or behavioural disorder due to alcohol or other use or abuse of psychoactive substances, including recreational substances with or without dependency, shall be assessed as unfit until after a period of documented sobriety or freedom from psychoactive substance use or misuse and subject to satisfactory psychiatric evaluation after successful treatment. Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority. Fitness of Class 2 applicants shall be assessed in consultation with the Authority.

(c) Applicants with a psychiatric condition such as:

(1) mood disorder;

(2) neurotic disorder;

(3) personality disorder;

(4) mental or behavioural disorder;

shall undergo satisfactory psychiatric evaluation before a fit assessment can be made.

(d) Applicants with a history of a single or repeated acts of deliberate self-harm shall be assessed as unfit. Applicants shall undergo satisfactory psychiatric evaluation before a fit assessment can be considered.

(e) Aero-medical assessment:

(1) applicants for a Class 1 or Class 3 medical certificate with one of the conditions detailed in (b), (c) or (d) above shall be referred to the Authority;

(2) fitness of Class 2 applicants with one of the conditions detailed in (b), (c) or (d) above shall be assessed in consultation with the Authority.

(f) Applicants with an established history or clinical diagnosis of schizophrenia, schizotypal or delusional disorder shall be assessed as unfit.

## 2.060 Psychology

(a) Applicants shall have no established psychological deficiencies, which are likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Applicants who present with stress-related symptoms that are likely to interfere with their ability to exercise the privileges of the licence safely shall be referred to the licensing authority. A fit assessment may only be considered after a psychological and/or psychiatric evaluation has demonstrated that the applicant has recovered from stress- related symptoms.

(c) A psychological evaluation may be required as part of, or complementary to, a specialist psychiatric or neurological examination.

## 2.065 Neurology

(a) Applicants shall have no established medical history or clinical diagnosis of any neurological condition which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Applicants with an established history or clinical diagnosis of the following shall be assessed as unfit.

(1) Epilepsy except in cases of (C)(1) and (C)(2) below;

(2) recurring episodes of disturbance of consciousness of uncertain cause;

(3) conditions with a high propensity for cerebral dysfunction.

(c) Applicants with an established history or clinical diagnosis of:

(1) epilepsy without recurrence after age 5;

(2) epilepsy without recurrence and off all treatment for more than 10 years;

(3) epileptiform EEG abnormalities and focal slow waves;

(4) progressive or non-progressive disease of the nervous system;

(5) a single episode of disturbance of consciousness;

(6) brain injury;

(7) spinal or peripheral nerve injury;

(8) disorders of the nervous system due to vascular deficiencies including haemorrhagic and ishaemic events.

shall undergo further evaluation before a fit assessment can be considered. Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority. Fitness of Class 2 applicants shall be assessed in consultation with the Authority.

**2.070 Visual System**

(a) Applicants shall not possess any abnormality of the function of the eyes or their adnexa or any active pathological condition, congenital or acquired, acute or chronic, or any sequelae of eye surgery or trauma, which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Examination

(1) For a Class 1 medical certificate:

(i) a comprehensive eye examination shall form part of the initial examination and be undertaken periodically depending on the refraction and the functional performance of the eye;

(ii) a routine eye examination shall form part of all revalidation and renewal

examinations.

(2) For a Class 2 medical certificate:

(i) a routine eye examination shall form part of the initial and all revalidation and renewal examinations; and

(ii) a comprehensive eye examination shall be undertaken when clinically indicated.

(3) For a Class 3 medical certificate:

(i) a comprehensive eye examination shall form part of the initial examination and be undertaken periodically depending on the refraction and the functional performance of the eye;

(ii) a routine eye examination shall form part of all revalidation and renewal examinations.

(iii) Applicants shall undergo tonometry at the first revalidation examination after the age of 40, on clinical indications and if indicated considering the family history.

(c) Distant visual acuity, with or without correction, shall be:

(1) in the case of Class 1 and Class 3 medical certificates, 6/9 (0,7) or better in each eye separately and visual acuity with both eyes shall be 6/6 (1,0) or better;

(2) in the case of Class 2 medical certificates, 6/12 (0,5) or better in each eye separately and visual acuity with both eyes shall be 6/9 (0,7) or better. An applicant with substandard vision in one eye may be assessed as fit in consultation with the Authority subject to satisfactory ophthalmic assessment;

(3) applicants for an initial Class 1 or Class 3 medical certificate with substandard vision in one eye shall be assessed as unfit. At revalidation, applicants with acquired substandard vision in one eye shall be referred to the Authority and may be assessed as fit if it is unlikely to interfere with safe exercise of the licence held.

(d) Initial applicants having monocular or functional monocular vision, including eye muscle balance problems, shall be assessed as unfit. At revalidation or renewal examinations the applicant may be assessed as fit provided that an ophthalmological examination is satisfactory. The applicant shall be referred to the Authority.

(e) An applicant shall be able to read an N5 chart (or equivalent) at 30-50 cm and an N14 chart (or equivalent) at 60 - 100 cm distance, if necessary with the aid of correction.

(f) Applicants for a Class 1 or Class 3 medical certificate shall be required to have normal fields of vision and normal binocular function.

(g) Applicants who have undergone eye surgery may be assessed as unfit until full recovery of the visual function. A fit assessment may be considered by the Authority subject to satisfactory ophthalmic evaluation.

(h) Applicants with a clinical diagnosis of keratoconus may be assessed as fit subject to a satisfactory

examination by an ophthalmologist. Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority.

(i) Applicants with diplopia shall be assessed as unfit.

(j) Spectacles and contact lenses. If satisfactory visual function is achieved only with the use of correction:

(1) (i) for distant vision, spectacles or contact lenses shall be worn whilst exercising the privileges of the applicable licence(s);

(ii) for near vision, a pair of spectacles for near use shall be kept available during the exercise of the privileges of the licence;

(2) a spare set of similarly correcting spectacles shall be readily available for immediate use whilst exercising the privileges of the applicable licence(s);

(3) the correction shall provide optimal visual function, be well-tolerated and suitable for aviation or air traffic control purposes, as appropriate;

(4) if contact lenses are worn, they shall be for distant vision, monofocal, non-tinted and not orthokeratological;

(5) applicants with a large refractive error shall use contact lenses or high-index spectacle lenses;

(6) Monovision contact lens shall not be used.

(7) no more than one pair of spectacles shall be used to meet the visual requirements;

(k) Applicants with a clinical diagnosis of glaucoma in one eye may be assessed as fit subject to a satisfactory examination by an ophthalmologist indicating pressure $\leq$ 21 mmHg. Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority.

(l) To ensure the measurement of visual acuity achieve uniformity, the Authority shall ensure that equivalence in the methods of evaluation be obtained.

(m) The following should be adopted for tests of visual acuity:

(1) Visual acuity tests should be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60 cd/$m^2$).

(2) Visual acuity should be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.

**2.075 Colour vision**

(a) Applicants shall be required to demonstrate the ability to perceive readily the colours that are necessary for the safe performance of duties.

(b) The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same colour temperature such as that provided by CIE standard illuminants C or $D_{65}$ as specified by the International Commission on Illumination (CIE).

(c) The Authority shall use the following method of examination as will guarantee reliable testing of colour perception

(1) Applicants shall pass the Ishihara test for the initial issue of a medical certificate.

(2) Applicants who fail to pass in the Ishihara test shall undergo further colour perception testing to establish whether they are colour safe.

(d) In the case of Class 1 or Class 3 medical certificates, applicants shall have normal perception of colours or be colour safe. Applicants who fail further colour perception testing shall be assessed as unfit. Applicants for a Class 1 or Class 3 medical certificate shall be referred to the Authority.

(e) In the case of Class 2 medical certificates, when the applicant does not have satisfactory perception of colours, his/her flying privileges shall be limited to daytime only.

**2.080 Otorhino-laryngology**

(a) The Authority shall use such methods of examination as will guarantee reliable testing of hearing

(b) Applicants shall not possess any abnormality of the function of the ears, nose, sinuses or throat, including oral cavity, teeth and larynx, or any active pathological condition, congenital or acquired, acute or chronic, or any sequelae of surgery or trauma which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(c) Hearing shall be satisfactory for the safe exercise of the privileges of the applicable licence(s) and a routine otorhinolaryngological examination shall form part of all initial, revalidation and renewal examinations every 5 years until the age of 40 and every 2 years thereafter.

(d) Examination

(1) Hearing shall be tested at all examinations.

(i) In the case of Class 1 medical certificates and Class 2 medical certificates, when an instrument rating is to be added to the licence held, hearing shall be tested with pure tone audiometry at the initial examination and, at subsequent revalidation or renewal examinations, every 5 years until the age 40 and every 2 years thereafter.

(ii) In the case of Class 3 medical certificates, hearing shall be tested with pure tone audiometry at the initial examination and, at subsequent revalidation or renewal examinations, every 4 years until the age 40 and every 2 years thereafter.

(iii) When tested on a pure-tone audiometer, initial applicants shall not have a hearing loss of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz, in either ear separately. Applicants for revalidation or renewal, with greater hearing loss shall demonstrate satisfactory functional hearing ability.

(iv) Applicants with hypoacusis shall demonstrate satisfactory functional hearing ability.

(e) Applicants for a Class 1 or Class 3 medical certificate with:

(1) an active pathological process, acute or chronic, of the internal or middle ear;

(2) unhealed perforation or dysfunction of the tympanic membrane(s);

(3) disturbance of vestibular function;

(4) significant malformation or significant chronic infection of the oral cavity or upper respiratory tract;

(5) significant disorder of speech or voice;

shall undergo further medical examination and assessment to establish that the condition does not interfere with the safe exercise of the privileges of the licence held.

(f) Aero-medical assessment:

(1) applicants for a Class 1 medical certificate with the disturbance of vestibular function shall be referred to the Authority;

(2) fitness of Class 2 applicants with the disturbance of vestibular function shall be assessed in consultation with the Authority.

(g) Hearing aids (Class 3 only):

(i) Initial examination: the need of hearing aids to comply with the hearing requirements entails unfitness.

(ii) Revalidation and renewal examinations: a fit assessment may be considered if the use of hearing aid(s) or of an appropriate prosthetic aid improves the hearing to achieve a normal standard as assessed by fully functional testing in the operational environment.

(iii) If a prosthetic aid is needed to achieve the normal hearing standard, a spare set of the equipment and accessories, such as batteries, shall be available when exercising the privileges of the licence.

**2.085 Dermatology**

Applicants shall have no established dermatological condition likely to interfere with the safe exercise of the privileges of the applicable licence(s) held.

**2.090 Oncology**

(a) Applicants shall have no established primary or secondary malignant disease likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) After treatment for primary or secondary malignant disease, applicants shall undergo satisfactory oncological evaluation before a fit assessment can be made. Class 1 and Class 3 applicants shall be referred to the Authority. Fitness of Class 2 applicants shall be assessed in consultation with the Authority.

(c) Applicants with an established history or clinical diagnosis of intracerebral malignant tumour shall be assessed as unfit.

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# CHAPTER 3

# AERO-MEDICAL EXAMINERS (AME)

## 3.001 Privileges

(a) The privileges of an AME are to issue, revalidate and renew medical certificates, and to conduct the relevant medical examinations and assessments.

(b) Holders of an AME certificate may apply for an extension of their privileges to include medical examinations for the revalidation and renewal of Class 1 medical certificates, if they comply with the requirements in 3.015.

(c) The scope of the privileges of the AME, and any condition thereof, shall be specified in the certificate.

(d) Holders of a certificate as an AME shall not undertake aero-medical examinations and assessments in another State unless they have:

(1) been granted access by the State to exercise their professional activities as a specialised doctor;

(2) informed the Authority of the State of their intention to conduct aero-medical examinations and assessments and to issue medical certificates within the scope of their privileges as AME; and

(3) received a briefing or guidance material from the National Aviation Authority of that State.

## 3.005 Application

(a) Application for a certificate as an AME shall be made in a form and manner specified by the Authority.

(b) Applicants for an AME certificate shall provide the Authority with:

(1) personal details and professional address;

(2) documentation demonstrating that they comply with the requirements established in 3.010, including a certificate of completion of the training course in aviation medicine appropriate to the privileges they apply for;

(3) a written declaration that the AME will issue medical certificates on the basis of the requirements of these regulations.

(c) When the AME undertakes aero-medical examinations in more than one location, they shall provide the Authority with relevant information regarding all practice locations.

## 3.010 Requirements for the issue of an AME certificate

(a) Applicants for an AME certificate with the privileges for the initial issue, revalidation and renewal of medical certificates shall;

(1) be fully qualified and licensed for the practice of medicine and hold a Certificate of Completion of specialist training;

(2) have undertaken a basic training course in aviation medicine;

(3) demonstrate to the Authority that they:

(i) have adequate facilities, procedures, documentation and functioning equipment suitable for aero-medical examinations; and

(ii) have in place the necessary procedures and conditions to ensure medical confidentiality.

(4) have practical knowledge and experience of the conditions in which the holders of flight crew licences and ratings carry out their duties.

(b) The competence of a medical examiner should be evaluated periodically by the medical assessor.

**3.015 Requirements for the extension of privileges**

Applicants for an AME certificate extending their privileges to the revalidation and renewal of Class 1 medical certificates shall hold a valid certificate as an AME and have:

(a) conducted at least 30 examinations for the issue, revalidation or renewal of Class 2 or Class 3 medical certificates over a period of no more than 5 years preceding the application;

(b) undertaken an advanced training course in aviation medicine; and

(c) undergone practical training at an AeMC or under supervision of the Authority.

**3.020 Training courses in aviation medicine**

(a) Training courses in aviation medicine shall be approved by the State where the organisation providing it has its principal place of business. The organisation providing the course shall demonstrate that the course syllabus is adequate and that the persons in charge of providing the training have adequate knowledge and experience.

(b) Except in the case of refresher training, the courses shall be concluded by a written examination on the subjects included in the course content.

(c) The organisation providing the course shall issue a certificate of completion to applicants when they have obtained a pass in the examination.

**3.025 Changes to the AME certificate**

(a) AMEs shall notify the Authority of the following changes which could affect their certificate:

(1) the AME is subject to disciplinary proceedings or investigation by a medical regulatory body;

(2) there are any changes to the conditions on which the certificate was granted, including the content of the statements provided with the application;

(3) the requirements for the issue are no longer met;

(4) there is a change of aero-medical examiner's practice location(s) or correspondence address.

(b) Failure to inform the Authority shall result in the suspension or revocation of the privileges of the certificate, on the basis of the decision of the Authority that suspends or revokes the certificate.

### 3.030 Validity of AME certificates

An AME certificate shall be issued for a period not exceeding 3 years. It shall be revalidated subject to the holder:

(a) continuing to fulfil the general conditions required for medical practice and maintaining registration as a medical practitioner according to national law;

(b) undertaking refresher training in aviation medicine within the last 3 years;

(c) having performed at least 10 aero-medical examinations every year;

(d) remaining in compliance with the terms of the AME certificate; and

(e) exercising the AME privileges in accordance with these regulations.

### 3.035 Health promotion

The Authority, in cooperation with AMEs, shall implement appropriate aviation-related health promotion for licence holders subject to a Medical Assessment to reduce future medical risks to flight safety.

### 3.040 Safety Management

(a) AMEs, in cooperation with the Authority, are required by CAR SMS, to apply basic safety management principles to the medical assessment process of licence holders that as a minimum includes:

(1) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and

(2) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.

(b) AMEs shall notify the Authority whenever they become aware of any event or finding that is addressed in (a) above.

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# CHAPTER 4

# MEDICAL ASSESSORS

## MED.4.001 Privileges

(a) The privileges of a Medical Assessor are to;

(1) evaluate medical certificates issued by Aero-medical Examiners in accordance with these regulations;

(2) periodically evaluate the competence of an Aero-medical Examiner;

(3) produce accredited medical conclusions regarding an applicant's failure to meet any requirement; and

(4) assess medical conditions of flight safety significance.

(b) A Medical Assessor may apply to conduct medical assessments as an Aero-medical Examiner in accordance with the requirements of Chapter 3 and be afforded those privileges.

(c) The scope of the privileges of the Medical Assessor, and any condition thereof, shall be specified in the Authorisation.

(d) Medical Assessors shall not conduct evaluations of medical certificates in another State unless they have:

(1) been granted access by the State to exercise their professional activities as a specialised doctor;

(2) informed the Authority of the State of their intention to conduct aero-medical evaluations; and

(3) received a briefing or guidance material from the National Aviation Authority of that State.

## MED.4.005 Requirements for the Authorisation of a Medical Assessor

An applicant for a Medical Assessor shall;

(a) be fully qualified and licensed for the practice of medicine and hold a Certificate of Completion of specialist training;

(b) have undertaken a basic training course in aviation medicine;

(c) demonstrate to the Authority that they:

(1) have adequate facilities, procedures, documentation and functioning equipment suitable for aero-medical examinations; and

(2) have in place the necessary procedures and conditions to ensure medical confidentiality.

(d) have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

**MED.4.010 Application**

(a) Application for a Medical Assessor shall be made in a form and manner specified by the Authority.

(b) Applicants for a Medical Assessor shall provide the Authority with:

(1) personal details and professional address;

(2) documentation demonstrating that they comply with the requirements established in CAR MED.4.005, including a certificate of completion of the training course in aviation medicine;

(3) a written declaration that the Medical Assessor will conduct medical evaluations on the basis of the requirements of these regulations.

(c) When the Medical Assessor undertakes medical evaluations in more than one location, he/she shall provide the Authority with relevant information regarding all practice locations.

**MED.4.015 Training courses in aviation medicine**

(a) Training courses in aviation medicine shall be approved by the State where the organisation providing it has its principal place of business. The organisation providing the course shall demonstrate that the course syllabus is adequate and that the persons in charge of providing the training have adequate knowledge and experience.

(b) Except in the case of refresher training, the courses shall be concluded by a written examination on the subjects included in the course content.

(c) The organisation providing the course shall issue a certificate of completion to applicants when they have obtained a pass in the examination.

**MED.4.020 Changes to the Medical Assessor's Authorisation**

(a) Medical Assessors shall notify the Authority of the following changes:

(1) the Medical Assessor is subject to disciplinary proceedings or investigation by a medical regulatory body;

(2) there are any changes to the conditions on which the Authorisation was granted, including the content of the statements provided with the application;

(3) the requirements for the issue are no longer met;

(4) there is a change of the Medical Assessor's practice location(s) or correspondence address.

(b) Failure to inform the Authority shall result in the suspension or revocation of the Medical Assessor's privileges, on the basis of the decision of the Authority that suspends or revokes the Authorisation.

**MED.4.025 Validity of Medical Assessor's Authorisation**

An Authorisation for a Medical Assessor shall be issued for a period not exceeding 3 years. It shall be revalidated subject to the holder:

(a) continuing to fulfil the general conditions required for medical practice and maintaining registration

as a medical practitioner according to national law;

(b) undertaking refresher training in aviation medicine within the last 3 years;

(c) remaining in compliance with the terms of their Authorisation; and

(d) exercising their privileges in accordance with these regulations.

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## SECTION 2 – ACCEPTABLE MEANS OF COMPLIANCE & GUIDANCE MATERIAL

1 *GENERAL*

1.1 This Section contains Acceptable Means of Compliance (AMC) and Guidance Material (GM) that has been agreed for inclusion in CAR MED.

1.2 Where a particular paragraph does not have an Acceptable Means of Compliance, it is considered that no supplementary material is required.

1.3 A numbering system has been used in which the Acceptable Means of Compliance or Guidance Material uses the same number as the paragraph to which it refers. The number is introduced by the letters AMC or GM to distinguish the material from the regulation itself.

1.4 The acronyms AMC and GM also indicate the nature of the material and for this purpose the types of material are defined as follows:

*Guidance Material (GM)* provides guidelines on a subject matter, such as how to comply with a regulation.

*Acceptable Means of Compliance (AMC)* illustrates a means, or several alternative means, but not necessarily the only possible means by which a requirement can be met.

2 *USE OF ALTERNATIVE MEANS OF COMPLIANCE (AMOC)*

2.1 An operator/organisation/person may apply to use an alternative means of compliance (AMOC) instead of an Acceptable Means of Compliance (AMC).

This means of compliance must, as a minimum, meet the safety intent of the specific regulation(s) to which it refers. When applying to use an AMOC the applicant must define the elements of the means of compliance from which he proposes to deviate and provide the rationale as to the manner in which it demonstrates an equivalent level of safety and performance standard to the intent of the regulation. An AMOC is subject to prior approval of the Authority.

2.2 An applicant must state the regulation to which the AMOC refers; outline the issue that the AMOC sets out to address; state whether there is an AMC available on the same issue; state the exact wording of the AMOC in the required format for an AMC; summarize the AMOC and describe how it demonstrates compliance with the relevant regulation; provide details of risk assessments carried out and of internal procedures; provide amendments to manuals and procedures necessary for the AMOC; provide any additional information; and the application must be signed by the Focal Point within the organisation to whom questions should be addressed.

2.3 The Authority will consider whether an AMOC demonstrates an acceptable means of compliance with the regulation to which it refers, and will consider:

a. The technical quality of the proposal to demonstrate compliance with the intent of the relevant regulation

b. The safety risk attached to the proposal

c. The applicants' record of compliance

d. Industry best practice

2.4 When the Authority has approved an AMOC for use by a regulated person or organisation, it will be published with basic identifying information only, in order to protect any commercially sensitive information. Full details may be sought from the originator of the AMOC, although it should be noted that they are not obliged to provide them. If at any time the Authority, in the course of an audit or inspection, makes a finding against the AMOC, then approval may be withdrawn.

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# CHAPTER 1

# GENERAL REQUIREMENTS

## Section 1

## General

### AMC 1.030 Medical confidentiality

To ensure medical confidentiality, all medical reports and records should be securely held with accessibility restricted to personnel authorised by the medical assessor.

### AMC 1.035 Decrease in medical fitness

If in any doubt about their fitness to fly, use of medication or treatment:

(a) holders of class 1 or class 2 medical certificates should seek the advice of an AeMC or AME;

(b) holders of Class 3 medical certificates should seek the advice of an AeMC or AME, or of the GMP who issued the holder's medical certificate;

(c) suspension of exercise of privileges: holders of a medical certificate should seek the advice of an AeMC or AME when they have been suffering from any illness involving incapacity to function as a member of the flight crew for a period of at least 21 days.

### AMC 1.045 Obligations of AeMC or AME

(a) The report required in 1.025 (b)(4) should detail the results of the examination and the evaluation of the findings with regard to medical fitness.

(b) The report may be submitted in electronic format, but adequate identification of the examiner should be ensured.

(c) If the medical examination is carried out by two or more AMEs s, only one of them should be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

## Section 2

## Requirements for medical certificates

### AMC 1.060 Medical certificates

(a) A class 1 medical certificate includes the privileges and validities of class 2 and 3 medical certificates.

### AMC 1.065 Application for a medical certificate

Except for initial applicants, when applicants do not present a current or previous medical certificate to the AeMC or AME prior to the relevant examinations, the AeMC or AME should not issue the medical certificate unless relevant information is received from the Authority.

### AMC 1.075 Validity, revalidation and renewal of medical certificates

The validity period of a medical certificate (including any associated examination or special investigation) is determined by the age of the applicant at the date of the medical examination.

## CHAPTER 2

## SPECIFIC REQUIREMENTS FOR CLASS 1, CLASS 2 AND CLASS 3 MEDICAL CERTIFICATES

### AMC for class 1, class 2 and class 3 medical certificates

### Section 1

### General

**AMC 2.001(c)(1-3) Limitations to class 1 and class 2 medical certificates**

(a) An AeMC or AME may refer the decision on fitness of the applicant to the Authority in borderline cases or where fitness is in doubt.

(b) In cases where a fit assessment can only be considered with a limitation, the AeMC or AME or the Authority should evaluate the medical condition of the applicant in consultation with appropriate flight operations personnel for Class 1 and Class 2 medical certificates and other experts, if necessary.

(c) Limitation codes (Class 1 and Class 2 flight crew only)

| | Code | Limitation |
|---|---|---|
| 1 | TML | restriction of the period of validity of the medical certificate |
| 2 | VDL | correction for defective distant vision |
| 3 | VML | correction for defective distant, intermediate and near vision |
| 4 | VNL | correction for defective near vision |
| 5 | CCL | correction by means of contact lenses only |
| 6 | VCL | valid by day only |
| 7 | HAL | valid only when hearing aids are worn |
| 8 | APL | valid only with approved prosthesis |
| 9 | OCL | valid only as co-pilot |
| 10 | OPL | valid only without passengers (PPL only) |
| 11 | SSL | special restriction as specified |
| 12 | OAL | restricted to demonstrated aircraft type |
| 13 | AHL | valid only with approved hand controls |
| 14 | SIC | specific regular medical examination(s) - contact Authority |
| 15 | RXO | specialist ophthalmological examinations |
| 16 | OSA | obstructive sleep apnea |

(d) Entry of limitations

(1) Limitations 1 to 4 may be imposed by an AME or an AeMC.

(2) Limitations 5 to 15 should only be imposed:

(i) for class 1 medical certificates by the Authority;

(ii) for class 2 medical certificates by the AME or AeMC in consultation with the Authority;

(e) Removal of limitations

(1) For class 1 medical certificates, all limitations should only be removed by the Authority.

(2) For class 2 medical certificates, limitations may be removed by the Authority or by an AeMC or AME in consultation with the Authority.

**TML Time limitation**

The period of validity of the medical certificate is limited to the duration as shown on the medical certificate. This period of validity commences on the date of the medical examination. Any period of validity remaining on the previous medical certificate is no longer valid. The pilot should present him/herself for re-examination when advised and should follow any medical recommendations.

**VDL Wear corrective lenses and carry a spare set of spectacles**

Correction for defective distant vision: whilst exercising the privileges of the licence, the pilot should wear spectacles or contact lenses that correct for defective distant vision as examined and approved by the AME. Contact lenses may not be worn until cleared to do so by the AME. If contact lenses are worn, a spare set of spectacles, approved by the AME, should be carried.

**VML Wear multifocal spectacles and carry a spare set of spectacles**

Correction for defective distant, intermediate and near vision: whilst exercising the privileges of the licence, the pilot should wear spectacles that correct for defective distant, intermediate and near vision as examined and approved by the AME. Contact lenses or full frame spectacles, when either correct for near vision only, may not be worn.

**VNL Have available corrective spectacles and carry a spare set of spectacles**

Correction for defective near vision: whilst exercising the privileges of the licence, the pilot should have readily available spectacles that correct for defective near vision as examined and approved by the AME. Contact lenses or full frame spectacles, when either correct for near vision only, may not be worn.

**VCL Valid by day only**

The limitation allows private pilots with varying degrees of colour deficiency to exercise the privileges of their licence by daytime only. Applicable to class 2 medical certificates only.

**OML Valid only as or with qualified co-pilot**

This applies to crew members who do not meet the medical requirements for single crew operations, but are fit for multi-crew operations. Applicable to class 1 medical certificates only.

**OCL Valid only as co-pilot**

This limitation is a further extension of the OML limitation and is applied when, for some well-defined medical reason, the pilot is assessed as safe to operate in a co-pilot role but not in command. Applicable to class 1 medical certificates only.

**OPL Valid only without passengers**

This limitation may be considered when a pilot with a musculoskeletal problem, or some other medical condition, may involve an increased element of risk to flight safety which might be acceptable to the pilot but which is not acceptable for the carriage of passengers. Applicable to class 2 medical certificates only.

**OSL Valid only with safety pilot and in aircraft with dual controls**

The safety pilot is qualified as PIC on the class/type of aircraft and rated for the flight conditions. He/she occupies a control seat, is aware of the type(s) of possible incapacity that the pilot whose medical certificate has been issued with this limitation may suffer and is prepared to take over the aircraft controls during flight. Applicable to class 2 medical certificates only.

**OAL Restricted to demonstrated aircraft type**

This limitation may apply to a pilot who has a limb deficiency or some other anatomical problem which had been shown by a medical flight test or flight simulator testing to be acceptable but to require a restriction to a specific type of aircraft.

**SIC Specific regular medical examination(s) contact Authority**

This limitation requires the AME to contact the Authority before embarking upon renewal or recertification medical assessment. It is likely to concern a medical history of which the AME should be aware prior to undertaking the assessment.

**RXO Specialist ophthalmological examinations**

Specialist ophthalmological examinations are required for a significant reason. The limitation may be applied by an AME but should only be removed by the Authority.

**OSA Obstructive sleep apnea**

The limitation may be applied by an AME for any person with a BMI > 35 if sleep apnea may be indicated. This limitation requires the AME to discuss with the applicant before embarking upon renewal or recertification medical assessment and should only be removed by the AME.

**AMC 2.001(c)(4) Limitations to cabin crew class 2 medical certificates**

When assessing whether the holder of a cabin crew licence may be able to perform cabin crew duties safely if complying with one or more limitations, the following possible limitations should be considered:

(a) a restriction to operate only in multi-cabin crew operations (MCL);

(b) a restriction to specified aircraft type(s) (OAL) or to a specified type of operation (OOL);

(c) a requirement to undergo the next aero-medical examination and/or assessment at an earlier date than required by 3.005(b) (TML);

(d) a requirement to undergo specific regular medical examination(s) (SIC);

(e) a requirement for visual correction (CVL), or by means of corrective lenses only (CCL);

(f) a requirement to use hearing aids (HAL); and

(g) special restriction as specified (SSL).

**AMC 2.001(c)(5) Limitations to class 3 medical certificates**

(a) An AeMC or AME may refer the decision on fitness of the applicant to the Authority in borderline cases or where fitness is in doubt.

(b) In cases where a fit assessment can only be considered with a limitation, the AeMC or AME or the Authority should evaluate the medical condition of the applicant in consultation with the air navigation service provider for Class 3 medical certificates and other experts, if necessary.

(c) Limitation codes.

| Code | Limitation |
|---|---|
| TML | Restriction of the period of validity of the medical certificate |
| VDL | Wear correction for defective distant vision and carry spare set of spectacles |
| VXL | Correction for defective distant vision depending on the working environment |
| VML | Wear correction for defective distant, intermediate and near vision and carry spare set of spectacles |
| VNL | Have correction available for defective near vision and carry spare set of spectacles |
| VXN | Correction for defective near vision; correction for defective distant vision depending on the working environment |
| RXO | Specialist ophthalmological examinations |
| CCL | Correction by means of contact lenses |

| | |
|---|---|
| HAL | Valid only when hearing aids are worn |
| SIC | Specific medical examination(s) |
| SSL | Special restrictions as specified |
| OSA | Obstructive sleep apnea |

(d) The abbreviations for the limitation codes should be explained to the holder of a medical certificate as follows:

**TML — Time limitation**

The period of validity of the medical certificate is limited to the duration as shown on the medical certificate. This period of validity commences on the date of the aero-medical examination. Any period of validity remaining on the previous medical certificate is no longer valid. The holder of a medical certificate should present him/herself for reassessment or examination when advised and should follow any medical recommendations.

**VDL — Wear corrective lenses and carry a spare set of spectacles**

Correction for defective distant vision: whilst exercising the privileges of the licence, the holder of a medical certificate should wear spectacles or contact lenses that correct for defective distant vision as examined and approved by the AeMC or AME. Contact lenses may not be worn until cleared to do so by an AeMC or AME. A spare set of spectacles, approved by the AeMC or AME, should be readily available.

**VXL — Correction for defective distant vision depending on the working environment**

Correction for defective distant vision does not have to be worn if the air traffic controller's visual working environment is in the area of up to 100 cm. Applicants who do not meet the uncorrected distant visual acuity requirement but meet the visual acuity requirement for intermediate and near vision without correction and whose visual working environment is only the intermediate and near vision area (up to 100 cm) may work without corrective lenses.

**VML — Wear multifocal spectacles and carry a spare set of spectacles**

Correction for defective distant, intermediate and near vision: whilst exercising the privileges of the licence, the holder of a medical certificate should wear spectacles that correct for defective distant, intermediate and near vision as examined and approved by the AeMC or AME. Contact lenses or full-frame spectacles, when either correct for near vision only, may not be worn.

**VNL — Have available corrective spectacles and a spare set of spectacles**

Correction for defective near vision: whilst exercising the privileges of the licence, the holder of a medical certificate should have readily available spectacles that correct for defective near vision as examined and approved by the AeMC or AME. Contact lenses or full-frame spectacles, when either correct for near vision only, may not be worn.

**VXN — Have available corrective spectacles and a spare set of spectacles; correction for defective distant vision depending on the working environment**.

Correction for defective distant vision does not have to be worn if the air traffic controller's visual working environment is in the area of up to 100 cm. Applicants who do not meet the uncorrected distant and uncorrected near visual acuity requirements, but meet the visual acuity requirement for intermediate vision without correction and whose visual working environment is only the intermediate and near vision area (up to 100 cm) should have readily available spectacles and a spare set that correct for defective near vision as examined and approved by the AeMC or AME. Contact lenses or full-frame spectacles, when either correct for near vision only, may not be worn.

**CCL — Wear contact lenses that correct for defective vision**

Correction for defective distant vision: whilst exercising the privileges of the licence, the holder of a medical certificate should wear contact lenses that correct for defective distant vision, as examined and approved by the AeMC or AME. A spare set of similarly correcting spectacles shall be readily available for immediate use whilst exercising the privileges of the licence.

**RXO — Specialist ophthalmological examination(s)**

Specialist ophthalmological examination(s), other than the examinations stipulated, are required for a significant reason.

**HAL — Hearing aid(s)**

Whilst exercising the privileges of the licence, the holder of the medical certificate should use hearing aid(s) that compensate(s) for defective hearing as examined and approved by the AeMC or AME. A spare set of batteries should be available.

**SIC — Specific medical examination(s)**

This limitation requires the AeMC or AME to contact the licensing authority before embarking upon renewal or revalidation aero-medical assessment. It is likely to concern a medical history of which the AME should be aware prior to undertaking the aero-medical assessment.

**SSL — Special restrictions as specified**

This limitation may be considered when an individually specified limitation, not defined in this paragraph, is appropriate to mitigate an increased level of risk to the safe exercise of the privileges of the licence. The description of the SSL should be entered on the medical certificate or in a separate document to be carried with the medical certificate.

**OSA — Obstructive sleep apnea**

The limitation may be applied by an AME for any person with a BMI > 35 if sleep apnea may be indicated. This limitation requires the AME to discuss with the applicant before embarking upon renewal or recertification medical assessment and should only be removed by the AME.

## Section 2

## Specific requirements for class 1 medical certificates

### AMC1 2.010 Cardiovascular system

(a) Examination

Exercise electrocardiography

An exercise ECG when required as part of a cardiovascular assessment should be symptom limited and completed to a minimum of Bruce Stage IV or equivalent.

(b) General

(1) Cardiovascular risk factor assessment

(i) Serum lipid estimation is case finding and significant abnormalities should require review, investigation and supervision by the AeMC or AME in consultation with the Authority.

(ii) An accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) should require cardiovascular evaluation by the AeMC or AME in consultation with the Authority.

(2) Cardiovascular assessment

(i) Reporting of resting and exercise electrocardiograms should be by the AME or an accredited specialist.

(ii) The extended cardiovascular assessment should be undertaken at an AeMC or may be delegated to a cardiologist.

(c) Peripheral arterial disease

If there is no significant functional impairment, a fit assessment may be considered by the Authority, provided:

(1) applicants without symptoms of coronary artery disease have reduced any vascular risk factors to an appropriate level;

(2) applicants should be on acceptable secondary prevention treatment;

(3) exercise electrocardiography is satisfactory. Further tests may be required which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(d) Aortic aneurysm

(1) Applicants with an aneurysm of the infra-renal abdominal aorta may be assessed as fit with a multi-pilot limitation by the Authority. Follow-up by ultra-sound scans or other imaging techniques, as necessary, should be determined by the Authority.

(2) Applicants may be assessed as fit by the Authority after surgery for an infra-renal aortic aneurysm with a multi-pilot limitation at revalidation if the blood pressure and cardiovascular assessment are satisfactory. Regular cardiological review should be required.

(e) Cardiac valvular abnormalities

(1) Applicants with previously unrecognised cardiac murmurs should undergo evaluation by a cardiologist and assessment by the Authority. If considered significant, further investigation should include at least 2D Doppler echocardiography or equivalent imaging.

(2) Applicants with minor cardiac valvular abnormalities may be assessed as fit by the Authority. Applicants with significant abnormality of any of the heart valves should be assessed as unfit.

(3) Aortic valve disease

(i) Applicants with a bicuspid aortic valve may be assessed as fit if no other cardiacor aortic abnormality is demonstrated. Follow-up with echocardiography, as necessary, should be determined by the Authority.

(ii) Applicants with aortic stenosis require Authority review. Left ventricular function should be intact. A history of systemic embolism or significant dilatation of the thoracic aorta is disqualifying. Those with a mean pressure gradient of up to 20 mmHg may be assessed as fit. Those with mean pressure gradient above 20 mmHg but not greater than 40 mmHg may be assessed as fit with a multi-pilot limitation. A mean pressure gradient up to 50 mmHg may be acceptable. Follow-up with 2D Doppler echocardiography, as necessary, should be determined by the Authority. Alternative measurement techniques with equivalent ranges may be used.

(iii) Applicants with trivial aortic regurgitation may be assessed as fit. A greater degree of aortic regurgitation should require a multi-pilot limitation. There should be no demonstrable abnormality of the ascending aorta on 2D Doppler echocardiography. Follow-up, as necessary, should be determined by the Authority.

(4) Mitral valve disease

(i) Asymptomatic applicants with an isolated mid-systolic click due to mitral leaflet prolapse may be assessed as fit.

(ii) Applicants with rheumatic mitral stenosis should normally be assessed as unfit.

(iii) Applicants with uncomplicated minor regurgitation may be assessed as fit. Periodic cardiolological review should be determined by the Authority.

(iv) Applicants with uncomplicated moderate mitral regurgitation may be considered as fit with a multi-pilot limitation if the 2D Doppler echocardiogram demonstrates satisfactory left ventricular dimensions and satisfactory myocardial function is confirmed by exercise electrocardiography. Periodic cardiological review should be required, as determined by the Authority.

(v) Applicants with evidence of volume overloading of the left ventricle demonstrated by increased left ventricular end-diastolic diameter or evidence of systolic impairment should be assessed as unfit.

(f) Valvular surgery

Applicants with cardiac valve replacement/repair should be assessed as unfit. A fit assessment may be considered by the Authority.

(1) Aortic valvotomy should be disqualifying.

(2) Mitral leaflet repair for prolapse is compatible with a fit assessment, provided post- operative investigations reveal satisfactory left ventricular function without systolic or diastolic dilation and no more than minor mitral regurgitation.

(3) Asymptomatic applicants with a tissue valve or with a mechanical valve who, at least 6 months following surgery, are taking no cardioactive medication may be considered for a fit assessment with a multi-pilot limitation by the Authority. Investigations which demonstrate normal valvular and ventricular configuration and function should have been completed as demonstrated by:

(i) a satisfactory symptom limited exercise ECG. Myocardial perfusion imaging/stress echocardiography should be required if the exercise ECG is abnormal or any coronary artery disease has been demonstrated;

(ii) a 2D Doppler echocardiogram showing no significant selective chamber enlargement, a tissue valve with minimal structural alteration and a normal Doppler blood flow, and no structural or functional abnormality of the other heart valves. Left ventricular fractional shortening should be normal.
Follow-up with exercise ECG and 2D echocardiography, as necessary, should be

determined by the Authority.

(4) Where anticoagulation is needed after valvular surgery, a fit assessment with a multi-pilot limitation may be considered after review by the Authority. The review should show that the anticoagulation is stable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range.

(g) Thromboembolic disorders

Arterial or venous thrombosis or pulmonary embolism are disqualifying whilst anticoagulation is being used as treatment. After 6 months of stable anticoagulation as prophylaxis, a fit assessment with multi-pilot limitation may be considered after review by the Authority. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. Pulmonary embolus should require full evaluation. Following cessation of anti-coagulant therapy, for any indication, applicants should require review by the Authority.

(h) Other cardiac disorders

(1) Applicants with a primary or secondary abnormality of the pericardium, myocardium or endocardium should be assessed as unfit. A fit assessment may be considered by the Authority following complete resolution and satisfactory cardiological evaluation which may include 2D Doppler echocardiography, exercise ECG and/or myocardial perfusion imaging/stress echocardiography and 24-hour ambulatory ECG. Coronary angiography may be indicated. Frequent review and a multi-pilot limitation may be required after fit assessment.

(2) Applicants with a congenital abnormality of the heart, including those who have undergone surgical correction, should be assessed as unfit. Applicants with minor abnormalities that are functionally unimportant may be assessed as fit by the Authority following cardiological assessment. No cardioactive medication is acceptable. Investigations may include 2D Doppler echocardiography, exercise ECG and 24-hour ambulatory ECG. Regular cardiological review should be required.

(i) Syncope

(1) Applicants with a history of recurrent vasovagal syncope should be assessed as unfit. A fit assessment may be considered by the Authority after a 6-month period without recurrence provided cardiological evaluation is satisfactory. Such evaluation should include:

(i) a satisfactory symptom limited 12 lead exercise ECG to Bruce Stage IV or equivalent. If the exercise ECG is abnormal, myocardial perfusion imaging/stress echocardiography should be required;

(ii) a 2D Doppler echocardiogram showing neither significant selective chamber enlargement nor structural or functional abnormality of the heart, valves or myocardium;

(iii) a 24-hour ambulatory ECG recording showing no conduction disturbance, complex or sustained rhythm disturbance or evidence of myocardial ischaemia.

(2) A tilt test carried out to a standard protocol showing no evidence of vasomotor instability may be required.

(3) Neurological review should be required.

(4) A multi-pilot limitation should be required until a period of 5 years has elapsed without recurrence. The Authority may determine a shorter or longer period of multi-pilot limitation according to the individual circumstances of the case.

(5) Applicants who experienced loss of consciousness without significant warning should be assessed as unfit.

(j) Blood pressure

(1) The diagnosis of hypertension should require cardiovascular review to include potential vascular risk factors.

(2) Anti-hypertensive treatment should be agreed by the Authority. Acceptable medication may include:

(i) non-loop diuretic agents;

(ii) ACE inhibitors;

(iii) angiotensin II/AT1 blocking agents (sartans);

(iv) slow channel calcium blocking agents;

(v) certain (generally hydrophilic) beta-blocking agents.

(3) Following initiation of medication for the control of blood pressure, applicants should be re-assessed to verify that the treatment is compatible with the safe exercise of the privileges of the licence held.

(k) Coronary artery disease

(1) Chest pain of uncertain cause should require full investigation.

(2) In suspected asymptomatic coronary artery disease, exercise electrocardiography should be required. Further tests may be required, which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(3) Evidence of exercise-induced myocardial ischaemia should be disqualifying.

(4) After an ischaemic cardiac event, including revascularisation, applicants without symptoms should have reduced any vascular risk factors to an appropriate level. Medication, when used to control cardiac symptoms, is not acceptable. All applicants should be on acceptable secondary prevention treatment.

(i) A coronary angiogram obtained around the time of, or during, the ischaemic myocardial event and a complete, detailed clinical report of the ischaemic event and of any operative procedures should be available to the Authority:

(A) there should be no stenosis more than 50 % in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel subtending a myocardial infarction. More than two stenoses between 30 % and 50 % within the vascular tree should not be acceptable;

(B) the whole coronary vascular tree should be assessed as satisfactory by a cardiologist, and particular attention should be paid to multiple stenoses and/or multiple revascularisations;

(C) an untreated stenosis greater than 30 % in the left main or proximal left anterior descending coronary artery should not be acceptable.

(ii) At least 6 months from the ischaemic myocardial event, including revascularisation, the following investigations should be completed (equivalent tests may be substituted):

(A) an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm or conduction disturbance;

(B) an echocardiogram showing satisfactory left ventricular function with no important abnormality of wall motion (such as dyskinesia or akinesia) and a left ventricular ejection fraction of 50 % or more;

(C) in cases of angioplasty/stenting, a myocardial perfusion scan or stress echocardiogram, which should show no evidence of reversible myocardial ischaemia. If there is any doubt about myocardial perfusion in other cases (infarction or bypass grafting) a perfusion scan should also be required;

(D) further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.

(iii) Follow-up should be annually (or more frequently, if necessary) to ensure that there is no deterioration of the cardiovascular status. It should include a review by a cardiologist, exercise ECG and cardiovascular risk assessment. Additional investigations may be required by the Authority.

(A) After coronary artery vein bypass grafting, a myocardial perfusion scan or equivalent test should be performed if there is any indication, and in all cases within 5 years from the procedure.

(B) In all cases, coronary angiography should be considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.

(iv) Successful completion of the 6-month or subsequent review will allow a fit assessment with a multi-pilot limitation.

(l) Rhythm and conduction disturbances

(1) Any significant rhythm or conduction disturbance should require evaluation by a cardiologist and appropriate follow-up in the case of a fit assessment. Such evaluation should include:

(i) exercise ECG to the Bruce protocol or equivalent. Bruce stage 4 should be achieved and no significant abnormality of rhythm or conduction, or evidence of myocardial ischaemia should be demonstrated. Withdrawal of cardioactive medication prior to the test should normally be required;

(ii) 24-hour ambulatory ECG which should demonstrate no significant rhythm or conduction disturbance;

(iii) 2D Doppler echocardiogram which should show no significant selective chamber enlargement or significant structural or functional abnormality, and a left ventricular ejection fraction of at least 50 %.

Further evaluation may include (equivalent tests may be substituted):

(iv) 24-hour ECG recording repeated as necessary;

(v) electrophysiological study;

(vi) myocardial perfusion imaging;

(vii) cardiac magnetic resonance imaging (MRI);

(viii) coronary angiogram.

(2) Applicants with frequent or complex forms of supra ventricular or ventricular ectopic complexes require full cardiological evaluation.

(3) Ablation

Applicants who have undergone ablation therapy should be assessed as unfit. A fit assessment may be considered by the Authority following successful catheter ablation and should require a multi-pilot limitation for at least one year, unless an electrophysiological study, undertaken at a minimum of 2 months after the ablation, demonstrates satisfactory results. For those whose long-term outcome cannot be assured by invasive or non-invasive testing, an additional period with a multi-pilot limitation and/or observation may be necessary.

(4) Supraventricular arrhythmias

Applicants with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, should be assessed as unfit. A fit assessment may be considered by the Authority if cardiological evaluation is satisfactory.

(i) Atrial fibrillation/flutter

(A) For initial applicants, a fit assessment should be limited to those with a single

episode of arrhythmia which is considered by the Authority to be unlikely to recur.

(B) For revalidation, applicants may be assessed as fit if cardiological evaluation is satisfactory.

(ii) Applicants with asymptomatic sinus pauses up to 2.5 seconds on resting electrocardiography may be assessed as fit if exercise electrocardiography, echocardiography and 24-hour ambulatory ECG are satisfactory.

(iii) Symptomatic sino-atrial disease should be disqualifying.

(5) Mobitz type 2 atrio-ventricular block

Applicants with Mobitz type 2 AV block should require full cardiological evaluation and may be assessed as fit in the absence of distal conducting tissue disease.

(6) Complete right bundle branch block

Applicants with complete right bundle branch block should require cardiological evaluation on first presentation and subsequently:

(i) for initial applicants under age 40, a fit assessment may be considered by the Authority. Initial applicants over age 40 should demonstrate a period of stability of 12 months;

(ii) for revalidation, a fit assessment may be considered if the applicant is under age 40. A multi-pilot limitation should be applied for 12 months for those over age 40.

(7) Complete left bundle branch block

A fit assessment may be considered by the Authority:

(i) Initial applicants should demonstrate a 3-year period of stability.

(ii) For revalidation, after a 3-year period with a multi-pilot limitation applied, a fit assessment without multi-pilot limitation may be considered.

(iii) Investigation of the coronary arteries is necessary for applicants over age 40.

(8) Ventricular pre-excitation

A fit assessment may be considered by the Authority:

(i) Asymptomatic initial applicants with pre-excitation may be assessed as fit if an electrophysiological study, including adequate drug-induced autonomic stimulation reveals no inducible re-entry tachycardia and the existence of multiple pathways is excluded.

(ii) Asymptomatic applicants with pre-excitation may be assessed as fit at revalidation with a multi-pilot limitation.

(9) Pacemaker

Applicants with a subendocardial pacemaker should be assessed as unfit. A fit assessment may be considered at revalidation by the Authority no sooner than 3 months after insertion and should require:

(i) no other disqualifying condition;

(ii) a bipolar lead system, programmed in bipolar mode without automatic mode change of the device;

(iii) that the applicant is not pacemaker dependent;
(iv) regular follow-up, including a pacemaker check; and

(v) a multi-pilot limitation.

(10) QT prolongation

Prolongation of the QT interval on the ECG associated with symptoms should be disqualifying. Asymptomatic applicants require cardiological evaluation for a fit assessment and a multi-pilot limitation may be required.

**AMC1 2.015 Respiratory system**

(a) Examination

(1) Spirometry

Spirometric examination is required for initial examination. An FEV1/FVC ratio less than 70 % at initial examination should require evaluation by a specialist in respiratory disease.

(2) Chest radiography

Posterior/anterior chest radiography may be required at initial, revalidation or renewal examinations when indicated on clinical or epidemiological grounds.

(b) Chronic obstructive airways disease

Applicants with chronic obstructive airways disease should be assessed as unfit. Applicants with only minor impairment of their pulmonary function may be assessed as fit.

(c) Asthma

Applicants with asthma requiring medication or experiencing recurrent attacks of asthma may be assessed as fit if the asthma is considered stable with satisfactory pulmonary function tests and medication is compatible with flight safety. Systemic steroids are disqualifying.

(d) Inflammatory disease

For applicants with active inflammatory disease of the respiratory system a fit assessment may be considered when the condition has resolved without sequelae and no medication is required.

(e) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Investigation should be undertaken with respect to the possibility of systemic, particularly cardiac, involvement. A fit assessment may be considered if no medication is required, and the disease is investigated and shown to be limited to hilar lymphadenopathy and inactive.

(2) Applicants with cardiac sarcoid should be assessed as unfit.

(f) Pneumothorax

(1) Applicants with a spontaneous pneumothorax should be assessed as unfit. A fit assessment may be considered if respiratory evaluation is satisfactory:

(i) 1 year following full recovery from a single spontaneous pneumothorax;

(ii) at revalidation, 6 weeks following full recovery from a single spontaneous pneumothorax, with a multi-pilot limitation;

(iii) following surgical intervention in the case of a recurrent pneumothorax provided there is satisfactory recovery.

(2) A recurrent spontaneous pneumothorax that has not been surgically treated is disqualifying.

(3) A fit assessment following full recovery from a traumatic pneumothorax as a result of an accident or injury may be acceptable once full absorption of the pneumothorax is demonstrated.

(g) Thoracic surgery

(1) Applicants requiring major thoracic surgery should be assessed as unfit for a minimum of 3 months following operation or until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(2) A fit assessment following lesser chest surgery may be considered by the Authority after satisfactory recovery and full respiratory evaluation.

(h) Sleep apnoea syndrome/sleep disorder

Applicants with unsatisfactorily treated sleep apnoea syndrome should be assessed as unfit.

**AMC1 2.020 Digestive system**

(a) Oesophageal varices

Applicants with oesophageal varices should be assessed as unfit.

(b) Pancreatitis

Applicants with pancreatitis should be assessed as unfit pending assessment. A fit assessment may be considered if the cause (e.g. gallstone, other obstruction, medication) is removed.

(c) Gallstones

(1) Applicants with a single asymptomatic large gallstone discovered incidentally may be assessed as fit if not likely to cause incapacitation in flight.

(2) An applicant with asymptomatic multiple gallstones may be assessed as fit with a multi-pilot limitation.

(d) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease should be assessed as fit if the inflammatory bowel disease is in established remission and stable and that systemic steroids are not required for its control.

(e) Peptic ulceration

Applicants with peptic ulceration should be assessed as unfit pending full recovery and demonstrated healing.

(f) Abdominal surgery

(1) Abdominal surgery is disqualifying for a minimum of 3 months. An earlier fit assessment may be considered if recovery is complete, the applicant is asymptomatic and there is only a minimal risk of secondary complication or recurrence.

(2) Applicants who have undergone a surgical operation on the digestive tract or its adnexa, involving a total or partial excision or a diversion of any of these organs, should be assessed as unfit for a minimum period of 3 months or until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the applicable licence(s).

**AMC1 2.025 Metabolic and endocrine systems**

(a) Metabolic, nutritional or endocrine dysfunction

Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit if the condition is asymptomatic, clinically compensated and stable with or without replacement therapy, and regularly reviewed by an appropriate specialist.

(b) Obesity

Applicants with a Body Mass Index > 35 may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the applicable licence(s) and a satisfactory cardiovascular risk review has been undertaken.

(c) Addison's disease

Addison's disease is disqualifying. A fit assessment may be considered, provided that cortisone is carried and available for use whilst exercising the privileges of the licence(s). Applicants may be assessed as fit with a multi-pilot limitation.

(d) Gout

Applicants with acute gout should be assessed as unfit. A fit assessment may be considered once asymptomatic, after cessation of treatment or the condition is stabilised on anti-hyperuricaemic therapy.

(e) Thyroid dysfunction

Applicants with hyperthyroidism or hypothyroidism should be assessed as unfit. A fit assessment may be considered when a stable euthyroid state is attained.

(f) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance without diabetic pathology is fully controlled by diet and regularly reviewed.

(g) Diabetes mellitus

Subject to good control of blood sugar with no hypoglycaemic episodes:

(1) applicants with diabetes mellitus not requiring medication may be assessed as fit;

(2) the use of antidiabetic medications that are not likely to cause hypoglycaemia may be acceptable for a fit assessment with a multi-pilot limitation.

**AMC1 2.030 Haematology**

(a) Abnormal haemoglobin

Applicants with abnormal haemoglobin should be investigated.

(b) Anaemia

(1) Applicants with anaemia demonstrated by a reduced haemoglobin level or haematocrit less than 32 % should be assessed as unfit and require investigation. A fit assessment may be considered in cases where the primary cause has been treated (e.g. iron or B12 deficiency) and the haemoglobin or haematocrit has stabilised at a satisfactory level.

(2) Anaemia which is unamenable to treatment is disqualifying.

(c) Polycythaemia

Applicants with polycythaemia should be assessed as unfit and require investigation. A fit assessment with a multi-pilot limitation may be considered if the condition is stable and no associated pathology is demonstrated.

(d) Haemoglobinopathy

(1) Applicants with a haemoglobinopathy should be assessed as unfit. A fit assessment may be considered where minor thalassaemia or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated. The haemoglobin level should be satisfactory.

(2) Applicants with sickle cell disease should be assessed as unfit.

(e) Coagulation disorders

Applicants with a coagulation disorder should be assessed as unfit. A fit assessment may be considered if

there is no history of significant bleeding episodes.

(f) Haemorrhagic disorders

Applicants with a haemorrhagic disorder require investigation. A fit assessment with a multi-pilot limitation may be considered if there is no history of significant bleeding.

(g) Thrombo-embolic disorders

(1) Applicants with a thrombotic disorder require investigation. A fit assessment with a multi-pilot limitation may be considered if there is no history of significant clotting episodes.

(2) An arterial embolus is disqualifying.

(h) Disorders of the lymphatic system

Applicants with significant localised and generalised enlargement of the lymphatic glands and diseases of the blood should be assessed as unfit and require investigation. A fit assessment may be considered in cases of an acute infectious process which is fully recovered or Hodgkin's lymphoma or other lymphoid malignancy which has been treated and is in full remission.

(i) Leukaemia

(1) Applicants with acute leukaemia should be assessed as unfit. Once in established remission, applicants may be assessed as fit.

(2) Applicants with chronic leukaemia should be assessed as unfit. After a period of demonstrated stability a fit assessment may be considered.

(3) Applicants with a history of leukaemia should have no history of central nervous system involvement and no continuing side-effects from treatment of flight safety importance. Haemoglobin and platelet levels should be satisfactory. Regular follow- up is required.

(j) Splenomegaly

Applicants with splenomegaly should be assessed as unfit and require investigation. A fit assessment may be considered when the enlargement is minimal, stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

**AMC1 2.035 Genitourinary system**

(a) Abnormal urinalysis

Investigation is required if there is any abnormal finding on urinalysis.

(b) Renal disease

(1) Applicants presenting with any signs of renal disease should be assessed as unfit. A fit assessment may be considered if blood pressure is satisfactory and renal function is acceptable.

(2) The requirement for dialysis is disqualifying.

(c) Urinary calculi

(1) Applicants with an asymptomatic calculus or a history of renal colic require investigation.

(2) Applicants presenting with one or more urinary calculi should be assessed as unfit and require investigation.

(3) A fit assessment with a multi-pilot limitation may be considered whilst awaiting assessment or treatment.

(4) A fit assessment without multi-pilot limitation may be considered after successful treatment for a calculus.

(5) With residual calculi, a fit assessment with a multi-pilot limitation may be considered.

(d) Renal/urological surgery

(1) Applicants who have undergone a major surgical operation on the urinary tract or the urinary apparatus involving a total or partial excision or a diversion of any of its organs should be assessed as unfit for a minimum period of 3 months or until such time as the effects of the operation are no longer likely to cause incapacity in flight. After other urological surgery, a fit assessment may be considered if the applicant is completely asymptomatic and there is minimal risk of secondary complication or recurrence.

(2) An applicant with compensated nephrectomy without hypertension or uraemia may be considered for a fit assessment.

(3) Applicants who have undergone renal transplantation may be considered for a fit assessment if it is fully compensated and tolerated with only minimal immuno- suppressive therapy after at least 12 months. Applicants may be assessed as fit with a multi-pilot limitation.

(4) Applicants who have undergone total cystectomy may be considered for a fit assessment if there is satisfactory urinary function, no infection and no recurrence of primary pathology. Applicants may be assessed as fit with a multi-pilot limitation.

**AMC1 2.040 Infectious disease**

(a) Infectious disease General

In cases of infectious disease, consideration should be given to a history of, or clinical signs indicating, underlying impairment of the immune system.

(b) Tuberculosis

Applicants with active tuberculosis should be assessed as unfit. A fit assessment may be considered following completion of therapy.

(c) Syphilis

Acute syphilis is disqualifying. A fit assessment may be considered in the case of those fully treated and recovered from the primary and secondary stages.

(d) HIV infection

(1) HIV positivity is disqualifying. A fit assessment with a multi-pilot limitation may be considered for individuals with stable, non-progressive disease. Frequent review is required.

(2) The occurrence of AIDS or AIDS-related complex is disqualifying.

(e) Infectious hepatitis

Infectious hepatitis is disqualifying. A fit assessment may be considered after full recovery.

**AMC1 2.045 Obstetrics and gynaecology**

(a) Gynaecological surgery

An applicant who has undergone a major gynaecological operation should be assessed as unfit for a period of 3 months or until such time as the effects of the operation are not likely to interfere with the safe exercise of the privileges of the licence(s) if the holder is completely asymptomatic and there is only a minimal risk of secondary complication or recurrence.

(b) Severe menstrual disturbances

An applicant with a history of severe menstrual disturbances unamenable to treatment should be assessed as unfit.

(c) Pregnancy

(1) A pregnant licence holder may be assessed as fit with a multi-pilot limitation during the first 26 weeks of gestation, following review of the obstetric evaluation by the AeMC or AME who should inform the Authority.

(2) The AeMC or AME should provide written advice to the applicant and the supervising physician regarding potentially significant complications of pregnancy.

**AMC1 2.050 Musculoskeletal system**

(a) An applicant with any significant sequela from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery requires full evaluation prior to a fit assessment.

(b) In cases of limb deficiency, a fit assessment may be considered following a satisfactory medical flight test or simulator testing.

(c) An applicant with inflammatory, infiltrative, traumatic or degenerative disease of the musculoskeletal system may be assessed as fit provided the condition is in remission and the applicant is taking no disqualifying medication and has satisfactorily completed a medical flight or simulator flight test. A limitation to specified aircraft type(s) may be required.

(d) Abnormal physique, including obesity, or muscular weakness may require medical flight or flight simulator testing. Particular attention should be paid to emergency procedures and evacuation. A limitation to specified aircraft type(s) may be required.

**AMC1 2.055 Psychiatry**

(a) Psychotic disorder

A history, or the occurrence, of a functional psychotic disorder is disqualifying unless a cause can be unequivocally identified as one which is transient, has ceased and will not recur.

(b) Organic mental disorder

An organic mental disorder is disqualifying. Once the cause has been treated, an applicant may be assessed as fit following satisfactory psychiatric review.

(c) Psychotropic substances

Use or abuse of psychotropic substances likely to affect flight safety is disqualifying.

(d) Schizophrenia, schizotypal or delusional disorder

Applicants with an established schizophrenia, schizotypal or delusional disorder should only be considered for a fit assessment if the Authority concludes that the original diagnosis was inappropriate or inaccurate or, in the case of a single episode of delirium, provided that the applicant has suffered no permanent impairment.

(e) Mood disorder

An established mood disorder is disqualifying. After full recovery and after full consideration of an individual case a fit assessment may be considered, depending on the characteristics and gravity of the mood disorder. If a stable maintenance psychotropic medication is confirmed, a fit assessment should require a multi-pilot limitation.

(f) Neurotic, stress-related or somatoform disorder

Where there is suspicion or established evidence that an applicant has a neurotic, stress- related or somatoform disorder, the applicant should be referred for psychiatric opinion and advice.

(g) Personality or behavioural disorder

Where there is suspicion or established evidence that an applicant has a personality or behavioural disorder, the applicant should be referred for psychiatric opinion and advice.

(h) Disorders due to alcohol or other substance use

(1) Mental or behavioural disorders due to alcohol or other substance use, with or without dependency, are disqualifying.

(2) A fit assessment may be considered after a period of two years documented sobriety or freedom from substance use. At revalidation or renewal a fit assessment may be considered earlier with a multi-pilot limitation. Depending on the individual case, treatment and review may include:

(i) in-patient treatment of some weeks followed by:

(A) review by a psychiatric specialist; and

(B) on-going review including blood testing and peer reports, which may be required indefinitely.

(i) Deliberate self-harm

A single self-destructive action or repeated acts of deliberate self-harm are disqualifying. A fit assessment may be considered after full consideration of an individual case and may require psychiatric or psychological review. Neuropsychological assessment may also be required.

**AMC1 2.060 Psychology**

(a) Where there is suspicion or established evidence that an applicant has a psychological disorder, the applicant should be referred for psychological opinion and advice.

(b) Established evidence should be verifiable information from an identifiable source which evokes doubts concerning the mental fitness or personality of a particular individual. Sources for this information can be accidents or incidents, problems in training or proficiency checks, delinquency or knowledge relevant to the safe exercise of the privileges of the applicable licence.

(c) The psychological evaluation may include a collection of biographical data, the administration of aptitude as well as personality tests and psychological interview.

(d) The psychologist should submit a written report to the AME, AeMC or Authority as appropriate, detailing his/her opinion and recommendation.

**AMC1 2.065 Neurology**

(a) Epilepsy

(1) A diagnosis of epilepsy is disqualifying, unless there is unequivocal evidence of a syndrome of benign childhood epilepsy associated with a very low risk of recurrence, and unless the applicant has been free of recurrence and off treatment for more than 10 years. One or more convulsive episodes after the age of 5 are disqualifying. In the case of an acute symptomatic seizure, which is considered to have a very low risk of recurrence, a fit assessment may be considered after neurological review.

(2) An applicant may be assessed as fit by the Authority with a multi-pilot limitation if:

(i) there is a history of a single afebrile epileptiform seizure;

(ii) there has been no recurrence after at least 10 years off treatment; (iii) there is no evidence of continuing predisposition to epilepsy.

(b) Conditions with a high propensity for cerebral dysfunction

An applicant with a condition with a high propensity for cerebral dysfunction should be assessed as unfit. A fit assessment may be considered after full evaluation.

(c) Clinical EEG abnormalities

(1) Electroencephalography is required when indicated by the applicant's history or on clinical grounds.

(2) Epileptiform paroxysmal EEG abnormalities and focal slow waves should be disqualifying.

(d) Neurological disease

Any stationary or progressive disease of the nervous system which has caused or is likely to cause a significant disability is disqualifying. However, in case of minor functional losses associated with stationary disease, a fit assessment may be considered after full evaluation.

(e) Episode of disturbance of consciousness

In the case of a single episode of disturbance of consciousness, which can be satisfactorily explained, a fit assessment may be considered, but a recurrence should be disqualifying.

(f) Head injury

An applicant with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury should be reviewed by a consultant neurologist. A fit assessment may be considered if there has been a full recovery and the risk of epilepsy is sufficiently low.

(g) Spinal or peripheral nerve injury, myopathies

An applicant with a history or diagnosis of spinal or peripheral nerve injury or myopathy should be assessed as unfit. A fit assessment may be considered if neurological review and musculoskeletal assessments are satisfactory.

**AMC1 2.070 Visual system**

(a) Eye examination

(1) At each aero-medical revalidation examination, an assessment of the visual fitness should be undertaken and the eyes should be examined with regard to possible pathology.

(2) All abnormal and doubtful cases should be referred to an ophthalmologist. Conditions which indicate ophthalmological examination include, but are not limited to, a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity and/or the occurrence of eye disease, eye injury, or eye surgery.

(3) Where specialist ophthalmological examinations are required for any significant reason, this should be imposed as a limitation on the medical certificate.

(b) Comprehensive eye examination

A comprehensive eye examination by an eye specialist is required at the initial examination. All abnormal and doubtful cases should be referred to an ophthalmologist. The examination should include:

(1) history;

(2) visual acuities - near, intermediate and distant vision (uncorrected and with best optical correction if needed);

(3) examination of the external eye, anatomy, media (slit lamp) and fundoscopy;

(4) ocular motility;

(5) binocular vision;

(6) colour vision;

(7) visual fields;

(8) tonometry on clinical indication; and

(9) refraction hyperopic initial applicants with a hyperopia of more than +2 dioptres and under the age of 25 should undergo objective refraction in cycloplegia.

(c) Routine eye examination

A routine eye examination may be performed by an AME and should include:

(1) history;

(2) visual acuities - near, intermediate and distant vision (uncorrected and with best optical correction if needed);

(3) examination of the external eye, anatomy, media and fundoscopy;

(4) further examination on clinical indication.

(d) Refractive error

(1) At initial examination an applicant may be assessed as fit with:

(i) hypermetropia not exceeding +5.0 dioptres;

(ii) myopia not exceeding –6.0 dioptres;

(iii) astigmatism not exceeding 2.0 dioptres;

(iv) anisometropia not exceeding 2.0 dioptres provided that optimal correction has been considered and no significant pathology is demonstrated.

(2) Initial applicants who do not meet the requirements in (1)(ii), (iii) and (iv) above should be referred to the Authority. A fit assessment may be considered following review by an ophthalmologist.

(3) At revalidation an applicant may be assessed as fit with:

(i) hypermetropia not exceeding +5.0 dioptres;

(ii) myopia exceeding –6.0 dioptres;

(iii) astigmatism exceeding 2.0 dioptres;

(iv) anisometropia exceeding 2.0 dioptres

provided that optimal correction has been considered and no significant pathology is demonstrated.

(4) If anisometropia exceeds 3.0 dioptres, contact lenses should be worn.

(5) If the refractive error is +3.0 to +5.0 or –3.0 to –6.0 dioptres, there is astigmatism or anisometropia of more than 2 dioptres but less than 3 dioptres, a review should be undertaken 5 yearly by an eye specialist.

(6) If the refractive error is greater than –6.0 dioptres, there is more than 3.0 dioptres of astigmatism or anisometropia exceeds 3.0 dioptres, a review should be undertaken 2 yearly by an eye specialist.

(7) In cases (5) and (6) above, the applicant should supply the eye specialist's report to the AME. The report should be forwarded to the Authority as part of the medical examination report. All abnormal and doubtful cases should be referred to an ophthalmologist.

(e) Uncorrected visual acuity

No limits apply to uncorrected visual acuity.

(f) Substandard vision

(1) Applicants with reduced central vision in one eye may be assessed as fit if the binocular visual field is normal and the underlying pathology is acceptable according to ophthalmological assessment. A satisfactory medical flight test and a multi-pilot limitation are required.

(2) An applicant with acquired substandard vision in one eye may be assessed as fit with a multi-pilot limitation if:

(i) the better eye achieves distant visual acuity of 6/6 (1.0), corrected or uncorrected;

(ii) the better eye achieves intermediate visual acuity of N14 and N5 for near;

(iii) in the case of acute loss of vision in one eye, a period of adaptation time has passed from the known point of visual loss, during which the applicant should be assessed as unfit;

(iv) there is no significant ocular pathology; and

(v) a medical flight test is satisfactory.

(3) An applicant with a visual field defect may be assessed as fit if the binocular visual field is normal and the underlying pathology is acceptable to the Authority.

(g) Keratoconus

Applicants with keratoconus may be assessed as fit if the visual requirements are met with the use of corrective lenses and periodic review is undertaken by an ophthalmologist.

(h) Heterophoria

Applicants with heterophoria (imbalance of the ocular muscles) exceeding:

(1) at 6 metres:

2.0 prism dioptres in hyperphoria,

10.0 prism dioptres in esophoria,

8.0 prism dioptres in exophoria and

(2) at 33 centimetres:

1.0 prism dioptre in hyperphoria,

8.0 prism dioptres in esophoria,

12.0 prism dioptres in exophoria

should be assessed as unfit. The applicant should be reviewed by an ophthalmologist and if the fusional reserves are sufficient to prevent asthenopia and diplopia a fit assessment may be considered.

(i) Eye surgery

The assessment after eye surgery should include an ophthalmological examination.

(1) After refractive surgery, a fit assessment may be considered, provided that:
(i) pre-operative refraction was not greater than +5 dioptres;

(ii) post-operative stability of refraction has been achieved (less than 0.75 dioptres variation diurnally);

(iii) examination of the eye shows no post-operative complications;

(iv) glare sensitivity is within normal standards;

(v) mesopic contrast sensitivity is not impaired;

(vi) review is undertaken by an eye specialist.

(2) Cataract surgery entails unfitness. A fit assessment may be considered after 3 months.

(3) Retinal surgery entails unfitness. A fit assessment may be considered 6 months after successful surgery. A fit assessment may be acceptable earlier after retinal laser therapy. Follow-up may be required.

(4) Glaucoma surgery entails unfitness. A fit assessment may be considered 6 months after successful surgery. Follow-up may be required.

(5) For (2), (3) and (4) above, a fit assessment may be considered earlier if recovery is complete.

(j) Correcting lenses

Correcting lenses should permit the licence holder to meet the visual requirements at all distances.

**AMC1 2.075 Colour vision**

(a) At revalidation, colour vision should be tested on clinical indication.

(b) The Ishihara test (24 plate version) is considered passed if the first 15 plates, presented in a random order, are identified without error.

(c) Those failing the Ishihara test should be examined either by:

(1) anomaloscopy (Nagel or equivalent). This test is considered passed if the colour match is trichromatic and the matching range is 4 scale units or less; or by

(2) lantern testing with a Spectrolux, Beynes or Holmes-Wright lantern. This test is considered passed if the applicant passes without error a test with accepted lanterns.

**AMC1 2.080 Otorhino-laryngology**

(a) Hearing

(1) The applicant should understand correctly conversational speech when tested with each ear at a distance of 2 metres from and with the applicant's back turned towards the AME.

(2) The pure tone audiogram should cover the 500 Hz, 1 000 Hz, 2 000 Hz and 3 000 Hz frequency thresholds.

(3) An applicant with hypoacusis should be referred to the Authority. A fit assessment may be considered if a speech discrimination test or functional flight deck hearing test demonstrates satisfactory hearing ability. A vestibular function test may be appropriate.

(4) If the hearing requirements can only be met with the use of hearing aids, the hearing aids should provide optimal hearing function, be well tolerated and suitable for aviation purposes.

(b) Comprehensive otorhinolaryngological examination

A comprehensive otorhino-laryngological examination should include:

(1) history;

(2) clinical examination including otoscopy, rhinoscopy, and examination of the mouth and throat;

(3) tympanometry or equivalent;

(4) clinical assessment of the vestibular system.

(c) Ear conditions

(1) An applicant with an active pathological process, acute or chronic, of the internal or middle ear should be assessed as unfit. A fit assessment may be considered once the condition has stabilised or there has been a full recovery.

(2) An applicant with an unhealed perforation or dysfunction of the tympanic membranes should be assessed as unfit. An applicant with a single dry perforation of non-infectious origin and which does not interfere with the normal function of the ear may be considered for a fit assessment.

(d) Vestibular disturbance

An applicant with disturbance of vestibular function should be assessed as unfit. A fit assessment may be considered after full recovery. The presence of spontaneous or positional nystagmus requires complete vestibular evaluation by an ENT specialist. Significant abnormal caloric or rotational vestibular responses are disqualifying. Abnormal vestibular responses should be assessed in their clinical context.

(e) Sinus dysfunction

An applicant with any dysfunction of the sinuses should be assessed as unfit until there has been full recovery.

(f) Oral/upper respiratory tract infections

A significant, acute or chronic infection of the oral cavity or upper respiratory tract is disqualifying. A fit assessment may be considered after full recovery.

(g) Speech disorder

A significant disorder of speech or voice is disqualifying.

**AMC1 2.085 Dermatology**

(a) Referral to the Authority should be made if doubt exists about the fitness of an applicant with eczema (exogenous and endogenous), severe psoriasis, bacterial infections, drug induced, or bullous eruptions or urticaria.

(b) Systemic effects of radiant or pharmacological treatment for a dermatological condition should be considered before a fit assessment can be considered.

(c) In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment may be considered.

**AMC1 2.090 Oncology**

(a) Applicants who underwent treatment for malignant disease may be assessed as fit by the Authority if:

(1) there is no evidence of residual malignant disease after treatment;

(2) time appropriate to the type of tumour has elapsed since the end of treatment;

(3) the risk of inflight incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short or long-term sequelae from treatment. Special attention should be paid to applicants who have received anthracycline chemotherapy;

(5) satisfactory oncology follow-up reports are provided to the Authority.

(b) A multi-pilot limitation should be applied as appropriate.

(c) Applicants with pre-malignant conditions of the skin may be assessed as fit if treated or excised as necessary and there is regular follow-up.

## Section 3

## Specific requirements for class 2 medical certificates

### AMC2 2.010 Cardiovascular system

(a) Examination

Exercise electrocardiography

An exercise ECG when required as part of a cardiovascular assessment should be symptom-limited and completed to a minimum of Bruce Stage IV or equivalent.

(b) General

(1) Cardiovascular risk factor assessment

An accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) requires cardiovascular evaluation.

(2) Cardiovascular assessment

Reporting of resting and exercise electrocardiograms should be by the AME or an accredited specialist.

(c) Peripheral arterial disease

A fit assessment may be considered for an applicant with peripheral arterial disease, or after surgery for peripheral arterial disease, provided there is no significant functional impairment, any vascular risk factors have been reduced to an appropriate level, the applicant is receiving acceptable secondary prevention treatment, and there is no evidence of myocardial ischaemia.

(d) Aortic aneurysm

(1) Applicants with an aneurysm of the thoracic or abdominal aorta may be assessed as fit, subject to satisfactory cardiological evaluation and regular follow-up.

(2) Applicants may be assessed as fit after surgery for a thoracic or abdominal aortic aneurysm subject to satisfactory cardiological evaluation to exclude the presence of coronary artery disease.

(e) Cardiac valvular abnormalities

(1) Applicants with previously unrecognised cardiac murmurs require further cardiological evaluation.

(2) Applicants with minor cardiac valvular abnormalities may be assessed as fit.

(f) Valvular surgery

(1) Applicants who have undergone cardiac valve replacement or repair may be assessed as fit if post-operative cardiac function and investigations are satisfactory and no anticoagulants are needed.

(2) Where anticoagulation is needed after valvular surgery, a fit assessment with an OSL or OPL limitation may be considered after cardiological review. The review should show that the anticoagulation is stable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range.

(g) Thromboembolic disorders

Arterial or venous thrombosis or pulmonary embolism are disqualifying whilst anticoagulation is being used as treatment. After 6 months of stable anticoagulation as prophylaxis, a fit assessment with an OSL or OPL limitation may be considered after review in consultation with the Authority. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. Pulmonary embolus should require full evaluation.

(h) Other cardiac disorders

(1) Applicants with a primary or secondary abnormality of the pericardium, myocardium or endocardium may be assessed as unfit pending satisfactory cardiological evaluation.

(2) Applicants with a congenital abnormality of the heart, including those who have undergone surgical correction, may be assessed as fit subject to satisfactory cardiological assessment. Cardiological follow-up may be necessary and should be determined in consultation with the Authority.

(i) Syncope

Applicants with a history of recurrent vasovagal syncope may be assessed as fit after a 6-month period without recurrence, provided that cardiological evaluation is satisfactory. Neurological review may be indicated.

(j) Blood pressure

(1) When the blood pressure at examination consistently exceeds 160 mmHg systolic and/or 95 mmHg diastolic, with or without treatment, the applicant should be assessed as unfit.

(2) The diagnosis of hypertension requires review of other potential vascular risk factors.

(3) Applicants with symptomatic hypotension should be assessed as unfit.

(4) Anti-hypertensive treatment should be compatible with flight safety.

(5) Following initiation of medication for the control of blood pressure, applicants should be re-assessed to verify that the treatment is compatible with the safe exercise of the privileges of the licence held.

(k) Coronary artery disease

(1) Chest pain of uncertain cause requires full investigation.

(2) In suspected asymptomatic coronary artery disease cardiological evaluation should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(3) After an ischaemic cardiac event, or revascularisation, applicants without symptoms should have reduced any vascular risk factors to an appropriate level. Medication, when used to control angina pectoris, is not acceptable. All applicants should be on acceptable secondary prevention treatment.

(i) A coronary angiogram obtained around the time of, or during, the ischaemic myocardial event and a complete, detailed clinical report of the ischaemic event and of any operative procedures should be available to the AME.

(A) There should be no stenosis more than 50 % in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel subtending a myocardial infarction. More than two stenoses between 30 % and 50 % within the vascular tree should not be acceptable.

(B) The whole coronary vascular tree should be assessed as satisfactory and particular attention should be paid to multiple stenoses and/or multiple revascularisations.

(C) An untreated stenosis greater than 30 % in the left main or proximal left anterior descending coronary artery should not be acceptable.

(ii) At least 6 months from the ischaemic myocardial event, including revascularisation, the following investigations should be completed (equivalent tests may be substituted):

(A) an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm disturbance;

(B) an echocardiogram showing satisfactory left ventricular function with no important abnormality of wall motion and a satisfactory left ventricular ejection fraction of 50 %

or more;

(C) in cases of angioplasty/stenting, a myocardial perfusion scan or stress echocardiogram which should show no evidence of reversible myocardial ischaemia. If there is doubt about revascularisation in myocardial infarction or bypass grafting, a perfusion scan should also be required;

(D) further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.

(iii) Periodic follow-up should include cardiological review.

(A) After coronary artery bypass grafting, a myocardial perfusion scan (or satisfactory equivalent test) should be performed if there is any indication, and in all cases within five years from the procedure for a fit assessment without a safety pilot limitation.

(B) In all cases, coronary angiography should be considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.

(iv) Successful completion of the six month or subsequent review will allow a fit assessment. Applicants may be assessed as fit with a safety pilot limitation having successfully completed only an exercise ECG.

(4) Angina pectoris is disqualifying, whether or not it is abolished by medication.

(l) Rhythm and conduction disturbances

Any significant rhythm or conduction disturbance should require cardiological evaluation and an appropriate follow-up before a fit assessment may be considered. An OSL or OPL limitation should be considered as appropriate.

(1) Ablation

A fit assessment may be considered following successful catheter ablation subject to satisfactory cardiological review undertaken at a minimum of 2 months after the ablation.

(2) Supraventricular arrhythmias

(i) Applicants with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, may be assessed as fit if cardiological evaluation is satisfactory.

(ii) Applicants with atrial fibrillation/flutter may be assessed as fit if cardiological evaluation is satisfactory.

(iii) Applicants with asymptomatic sinus pauses up to 2.5 seconds on resting electrocardiography may be assessed as fit if cardiological evaluation is satisfactory.

(3) Heart block

(i) Applicants with first degree and Mobitz type 1 AV block may be assessed as fit.

(ii) Applicants with Mobitz type 2 AV block may be assessed as fit in the absence of distal conducting tissue disease.

(4) Complete right bundle branch block

Applicants with complete right bundle branch block may be assessed as fit subject to satisfactory cardiological evaluation.

(5) Complete left bundle branch block

Applicants with complete left bundle branch block may be assessed as fit subject to satisfactory

cardiological assessment.

(6) Ventricular pre-excitation

Asymptomatic applicants with ventricular pre-excitation may be assessed as fit subject to satisfactory cardiological evaluation.

(7) Pacemaker

Applicants with a subendocardial pacemaker may be assessed as fit no sooner than 3 months after insertion provided:

(i) there is no other disqualifying condition;

(ii) a bipolar lead system is used, programmed in bipolar mode without automatic mode change of the device;

(iii) the applicant is not pacemaker dependent; and

(iv) the applicant has a regular follow-up, including a pacemaker check.

**AMC2 2.015 Respiratory system**

(a) Chest radiography

Posterior/anterior chest radiography may be required if indicated on clinical grounds.

(b) Chronic obstructive airways disease

Applicants with only minor impairment of pulmonary function may be assessed as fit.

(c) Asthma

Applicants with asthma may be assessed as fit if the asthma is considered stable with satisfactory pulmonary function tests and medication is compatible with flight safety. Systemic steroids should be disqualifying.

(d) Inflammatory disease

Applicants with active inflammatory disease of the respiratory system should be assessed as unfit pending resolution of the condition.

(e) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Investigation should be undertaken with respect to the possibility of systemic involvement. A fit assessment may be considered once the disease is inactive.

(2) Applicants with cardiac sarcoid should be assessed as unfit.

(f) Pneumothorax

(1) Applicants with spontaneous pneumothorax should be assessed as unfit. A fit assessment may be considered if respiratory evaluation is satisfactory six weeks following full recovery from a single spontaneous pneumothorax or following recovery from surgical intervention in the case of treatment for a recurrent pneumothorax.

(2) A fit assessment following full recovery from a traumatic pneumothorax as a result of an accident or injury may be acceptable once full absorption of the pneumothorax is demonstrated.

(g) Thoracic surgery

Applicants requiring major thoracic surgery should be assessed as unfit until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(h) Sleep apnoea syndrome

Applicants with unsatisfactorily treated sleep apnoea syndrome should be assessed as unfit.

**AMC2 2.020 Digestive system**

(a) Oesophageal varices

Applicants with oesophageal varices should be assessed as unfit.

(b) Pancreatitis

Applicants with pancreatitis should be assessed as unfit pending satisfactory recovery.

(c) Gallstones

(1) Applicants with a single asymptomatic large gallstone or asymptomatic multiple gallstones may be assessed as fit.

(2) Applicants with symptomatic single or multiple gallstones should be assessed as unfit. A fit assessment may be considered following gallstone removal.

(d) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease may be assessed as fit provided that the disease is stable and not likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(e) Peptic ulceration

Applicants with peptic ulceration should be assessed as unfit pending full recovery.

(f) Abdominal surgery

(1) Abdominal surgery is disqualifying. A fit assessment may be considered if recovery is complete, the applicant is asymptomatic and there is only a minimal risk of secondary complication or recurrence.

(2) Applicants who have undergone a surgical operation on the digestive tract or its adnexa, involving a total or partial excision or a diversion of any of these organs, should be assessed as unfit until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the applicable licence(s).

**AMC2 2.025 Metabolic and endocrine systems**

(a) Metabolic, nutritional or endocrine dysfunction

Metabolic, nutritional or endocrine dysfunction is disqualifying. A fit assessment may be considered if the condition is asymptomatic, clinically compensated and stable.

(b) Obesity

Obese applicants may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the applicable licence(s).

(c) Addison’s disease

Applicants with Addison’s disease may be assessed as fit provided that cortisone is carried and available for use whilst exercising the privileges of the licence.

(d) Gout

Applicants with acute gout should be assessed as unfit until asymptomatic.

(e) Thyroid dysfunction

Applicants with thyroid disease may be assessed as fit once a stable euthyroid state is attained.

(f) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance is fully controlled by diet and regularly reviewed.

(g) Diabetes mellitus

Applicants with diabetes mellitus may be assessed as fit. The use of antidiabetic medications that are not likely to cause hypoglycaemia may be acceptable.

**AMC2 2.030 Haematology**

(a) Abnormal haemoglobin

Haemoglobin should be tested when clinically indicated.

(b) Anaemia

Applicants with anaemia demonstrated by a reduced haemoglobin level or low haematocrit may be assessed as fit once the primary cause has been treated and the haemoglobin or haematocrit has stabilised at a satisfactory level.

(c) Polycythaemia

Applicants with polycythaemia may be assessed as fit if the condition is stable and no associated pathology is demonstrated.

(d) Haemoglobinopathy

Applicants with a haemoglobinopathy may be assessed as fit if minor thalassaemia or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated.

(e) Coagulation and haemorrhagic disorders

Applicants with a coagulation or haemorrhagic disorder may be assessed as fit if there is no likelihood of significant bleeding.

(f) Thrombo-embolic disorders

Applicants with a thrombotic disorder may be assessed as fit if there is no likelihood of significant clotting episodes.

(g) Disorders of the lymphatic system

Applicants with significant enlargement of the lymphatic glands or haematological disease may be assessed as fit if the condition is unlikely to interfere with the safe exercise of the privileges of the applicable licence(s). Applicants may be assessed as fit in cases of acute infectious process which is fully recovered or Hodgkin's lymphoma or other lymphoid malignancy which has been treated and is in full remission.

(h) Leukaemia

(1) Applicants with acute leukaemia may be assessed as fit once in established remission.

(2) Applicants with chronic leukaemia may be assessed as fit after a period of demonstrated stability.

(3) In cases (1) and (2) above there should be no history of central nervous system involvement and no continuing side effects from treatment of flight safety importance. Haemoglobin and platelet levels should be satisfactory. Regular follow- up is required.

(i) Splenomegaly

Applicants with splenomegaly may be assessed as fit if the enlargement is minimal, stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

**AMC2 2.035 Genitourinary system**

(a) Renal disease

Applicants presenting with renal disease may be assessed as fit if blood pressure is satisfactory and renal function is acceptable. The requirement for dialysis is disqualifying.

(b) Urinary calculi

(1) Applicants presenting with one or more urinary calculi should be assessed as unfit.

(2) Applicants with an asymptomatic calculus or a history of renal colic require investigation.

(3) While awaiting assessment or treatment, a fit assessment with a safety pilot limitation may be considered.

(4) After successful treatment the applicant may be assessed as fit.

(5) Applicants with parenchymal residual calculi may be assessed as fit.

(c) Renal/urological surgery

(1) Applicants who have undergone a major surgical operation on the urinary tract or the urinary apparatus involving a total or partial excision or a diversion of any of its organs should be assessed as unfit until such time as the effects of the operation are no longer likely to cause incapacity in flight. After other urological surgery, a fit assessment may be considered if the applicant is completely asymptomatic, there is minimal risk of secondary complication or recurrence presenting with renal disease, if blood pressure is satisfactory and renal function is acceptable. The requirement for dialysis is disqualifying.

(2) An applicant with compensated nephrectomy without hypertension or uraemia may be assessed as fit.

(3) Applicants who have undergone renal transplantation may be considered for a fit assessment if it is fully compensated and with only minimal immuno-suppressive therapy.

(4) Applicants who have undergone total cystectomy may be considered for a fit assessment if there is satisfactory urinary function, no infection and no recurrence of primary pathology.

**AMC2 2.040 Infectious diseases**

(a) Tuberculosis

Applicants with active tuberculosis should be assessed as unfit until completion of therapy.

(b) HIV infection

A fit assessment may be considered for HIV positive individuals with stable, non- progressive disease if full investigation provides no evidence of HIV-associated diseases that might give rise to incapacitating symptoms.

**AMC2 2.045 Obstetrics and gynaecology**

(a) Gynaecological surgery

An applicant who has undergone a major gynaecological operation should be assessed as unfit until such

time as the effects of the operation are not likely to interfere with the safe exercise of the privileges of the licence(s).

(b) Pregnancy

(1) A pregnant licence holder may be assessed as fit during the first 26 weeks of gestation following satisfactory obstetric evaluation.

(2) Licence privileges may be resumed upon satisfactory confirmation of full recovery following confinement or termination of pregnancy.

**AMC2 2.050 Musculoskeletal system**

(a) An applicant with any significant sequela from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery should require full evaluation prior to fit assessment.

(b) In cases of limb deficiency, a fit assessment may be considered following a satisfactory medical flight test.

(c) An applicant with inflammatory, infiltrative, traumatic or degenerative disease of the musculoskeletal system may be assessed as fit, provided the condition is in remission and the applicant is taking no disqualifying medication and has satisfactorily completed a medical flight test. A limitation to specified aircraft type(s) may be required.

(d) Abnormal physique or muscular weakness may require a satisfactory medical flight test. A limitation to specified aircraft type(s) may be required.

**AMC2 2.055 Psychiatry**

(a) Psychotic disorder

A history, or the occurrence, of a functional psychotic disorder is disqualifying unless in certain rare cases a cause can be unequivocally identified as one which is transient, has ceased and will not recur.

(b) Psychotropic substances

Use or abuse of psychotropic substances likely to affect flight safety is disqualifying. If a stable maintenance psychotropic medication is confirmed, a fit assessment with an OSL limitation may be considered.

(c) Schizophrenia, schizotypal or delusional disorder

An applicant with a history of schizophrenia, schizotypal or delusional disorder may only be considered fit if the original diagnosis was inappropriate or inaccurate as confirmed by psychiatric evaluation or, in the case of a single episode of delirium, provided that the applicant has suffered no permanent impairment.

(d) Disorders due to alcohol or other substance use

(1) Mental or behavioural disorders due to alcohol or other substance use, with or without dependency, are disqualifying.

(2) A fit assessment may be considered in consultation with the Authority after a period of two years documented sobriety or freedom from substance use. A fit assessment may be considered earlier with an OSL or OPL limitation. Depending on the individual case, treatment and review may include:

(i) in-patient treatment of some weeks followed by:

(A) review by a psychiatric specialist; and

(B) on-going review, including blood testing and peer reports, which may be required indefinitely.

**AMC2 2.060 Psychology**

Applicants with a psychological disorder may need to be referred for psychological or neuropsychiatric opinion and advice.

**AMC2 2.065 Neurology**

(a) Epilepsy

An applicant may be assessed as fit if:

(1) there is a history of a single afebrile epileptiform seizure, considered to have a very low risk of recurrence;

(2) there has been no recurrence after at least 10 years off treatment;

(3) there is no evidence of continuing predisposition to epilepsy.

(b) Conditions with a high propensity for cerebral dysfunction

An applicant with a condition with a high propensity for cerebral dysfunction should be assessed as unfit. A fit assessment may be considered after full evaluation.

(c) Neurological disease

Any stationary or progressive disease of the nervous system which has caused or is likely to cause a significant disability is disqualifying. In case of minor functional loss associated with stationary disease, a fit assessment may be considered after full evaluation.

(d) Head injury

An applicant with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury may be assessed as fit if there has been a full recovery and the risk of epilepsy is sufficiently low.

**AMC2 2.070 Visual system**

(a) Eye examination

(1) At each aero-medical revalidation examination an assessment of the visual fitness of the licence holder should be undertaken and the eyes should be examined with regard to possible pathology. Conditions which indicate further ophthalmological examination include, but are not limited to, a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity and/or the occurrence of eye disease, eye injury, or eye surgery.

(2) At the initial assessment, the examination should include:

(i) history;

(ii) visual acuities - near, intermediate and distant vision (uncorrected and with best optical correction if needed);

(iii) examination of the external eye, anatomy, media and fundoscopy;

(iv) ocular motility;

(v) binocular vision;

(vi) colour vision and visual fields;

(vii) further examination on clinical indication.

(3) At the initial assessment the applicant should submit a copy of the recent spectacle prescription if visual correction is required to meet the visual requirements.

(b) Routine eye examination

A routine eye examination should include:

(1) history;

(2) visual acuities - near, intermediate and distant vision (uncorrected and with best optical correction if needed);

(3) examination of the external eye, anatomy, media and fundoscopy;

(4) further examination on clinical indication.

(c) Visual acuity

In an applicant with amblyopia, the visual acuity of the amblyopic eye should be 6/18 (0,3) or better. The applicant may be assessed as fit, provided the visual acuity in the other eye is 6/6 (1,0) or better, with or without correction, and no significant pathology can be demonstrated.

(d) Substandard vision

(1) Reduced stereopsis, abnormal convergence not interfering with near vision and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may be acceptable.

(2) An applicant with substandard vision in one eye may be assessed as fit subject to a satisfactory flight test if the better eye:

(i) achieves distant visual acuity of 6/6 (1,0), corrected or uncorrected;

(ii) achieves intermediate visual acuity of N14 and N5 for near;

(iii) has no significant pathology.

(3) An applicant with a visual field defect may be considered as fit if the binocular visual field is normal and the underlying pathology is acceptable.

(e) Eye surgery

(1) The assessment after eye surgery should include an ophthalmological examination.

(2) After refractive surgery a fit assessment may be considered provided that there is stability of refraction, there are no postoperative complications and no increase in glare sensitivity.

(3) After cataract, retinal or glaucoma surgery a fit assessment may be considered once recovery is complete.

(f) Correcting lenses

Correcting lenses should permit the licence holder to meet the visual requirements at all distances.

**AMC2 MED 2.075 Colour vision**

(a) The Ishihara test (24 plate version) is considered passed if the first 15 plates, presented in a random order, are identified without error.

(b) Those failing the Ishihara test should be examined either by:

(1) anomaloscopy (Nagel or equivalent). This test is considered passed if the colour match is trichromatic and the matching range is 4 scale units or less; or by

(2) lantern testing with a Spectrolux, Beynes or Holmes-Wright lantern. This test is considered passed if the applicant passes without error a test with accepted lanterns.

(c) Colour vision should be tested on clinical indication at revalidation or renewal examinations.

**AMC2 2.080 Otorhino-laryngology**

(a) Hearing

(1) The applicant should understand correctly conversational speech when tested with each ear at a distance of 2 metres from and with the applicant's back turned towards the AME.

(2) An applicant with hypoacusis may be assessed as fit if a speech discrimination test or functional cockpit hearing test demonstrates satisfactory hearing ability. An applicant for an instrument rating with hypoacusis should be assessed in consultation with the Authority.

(3) If the hearing requirements can be met only with the use of hearing aids, the hearing aids should provide optimal hearing function, be well tolerated and suitable for aviation purposes.

(b) Examination

An ear, nose and throat (ENT) examination should form part of all initial, revalidation and renewal examinations.

(c) Ear conditions

(1) An applicant with an active pathological process, acute or chronic, of the internal or middle ear should be assessed as unfit until the condition has stabilised or there has been a full recovery.

(2) An applicant with an unhealed perforation or dysfunction of the tympanic membranes should be assessed as unfit. An applicant with a single dry perforation of non-infectious origin which does not interfere with the normal function of the ear may be considered for a fit assessment.

(d) Vestibular disturbance

An applicant with disturbance of vestibular function should be assessed as unfit pending full recovery.

(e) Sinus dysfunction

An applicant with any dysfunction of the sinuses should be assessed as unfit pending full recovery.

(f) Oral/upper respiratory tract infections

A significant acute or chronic infection of the oral cavity or upper respiratory tract is disqualifying until full recovery.

(g) Speech disorder

A significant disorder of speech or voice should be disqualifying.

(h) Air passage restrictions

An applicant with significant restriction of the nasal air passage on either side, or significant malformation of the oral cavity or upper respiratory tract may be assessed as fit if ENT evaluation is satisfactory.

(i) Eustachian tube function

An applicant with significant dysfunction of the Eustachian tubes may be assessed as fit in consultation with the Authority.

**AMC2 2.085 Dermatology**

In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment can be considered.

**AMC 2.090 Oncology**

(a) Applicants may be considered for a fit assessment after treatment for malignant disease if:

(1) there is no evidence of residual malignant disease after treatment;

(2) time appropriate to the type of tumour has elapsed since the end of treatment;

(3) the risk of in-flight incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short or long-term sequelae from treatment that may adversely affect flight safety;

(5) special attention is paid to applicants who have received anthracyline chemotherapy;

(6) arrangements for an oncological follow-up have been made for an appropriate period of time.

(b) Applicants with pre-malignant conditions of the skin may be assessed as fit if treated or excised as necessary and there is a regular follow-up.

## Section 4

## Specific requirements for Class 3 medical certificates

### AMC3 2.010 Cardiovascular system

(a) Electrocardiography

(1) An exercise electrocardiogram (ECG) when required as part of a cardiovascular assessment should be symptom-limited and completed to a minimum of Bruce Stage IV or equivalent.

(2) Reporting of resting and exercise ECGs should be carried out by the AME or an appropriate specialist.

(b) General

(1) Cardiovascular risk factor assessment

(i) Serum/plasma lipid estimation is case finding and significant abnormalities should require investigation and management under the supervision of the AeMC or AME in consultation with the Authority if necessary.

(ii) An accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) should require cardiovascular evaluation by the AeMC or AME in consultation with the Authority if necessary.

(2) Extended cardiovascular assessment

(i) The extended cardiovascular assessment should be undertaken at an AeMC or by a cardiologist.

(ii) The extended cardiovascular assessment should include an exercise ECG or other test that will provide equivalent information.

(c) Peripheral arterial disease

Applicants with peripheral arterial disease, before or after surgery, should undergo satisfactory cardiological evaluation including an exercise ECG and 2D echocardiography. Further tests may be required which should show no evidence of myocardial ischaemia or significant coronary artery stenosis. A fit assessment may be considered provided:

(1) the exercise ECG is satisfactory; and

(2) there is no sign of significant coronary artery disease or evidence of significant atheroma elsewhere, and no functional impairment of the end organ supplied.

(d) Aortic aneurysm

(1) Applicants with an aneurysm of the infra-renal abdominal aorta may be assessed as fit following a satisfactory cardiological evaluation.

(2) Applicants may be assessed as fit after surgery for an aneurysm of the thoracic or abdominal aorta if the blood pressure and cardiovascular evaluation are satisfactory. Regular evaluations by a cardiologist should be carried out.

(e) Cardiac valvular abnormalities

(1) Applicants with previously unrecognised cardiac murmurs should require cardiological evaluation. If considered significant, further investigation should include at least 2D Doppler echocardiography.

(2) Applicants with minor cardiac valvular abnormalities may be assessed as fit by the Authority. Applicants with significant abnormality of any of the heart valves should be assessed as unfit.

(3) Aortic valve disease

(i) Applicants with bicuspid aortic valve may be assessed as fit if no other cardiac or aortic abnormality is demonstrated. Regular cardiological follow-up, including 2D Doppler echocardiography, may be required.

(ii) Applicants with mild aortic stenosis may be assessed as fit. Annual cardiological follow-up may be required and should include 2D Doppler echocardiography.

(iii) Applicants with aortic regurgitation may be assessed as fit only if regurgitation is minor and there is no evidence of volume overload. There should be no demonstrable abnormality of the ascending aorta on 2D Doppler echocardiography. Cardiological follow-up including 2D Doppler echocardiography may be required.

(4) Mitral valve disease

(i) Applicants with rheumatic mitral stenosis may only be assessed as fit in favourable cases after cardiological evaluation including 2D echocardiography.

(ii) Applicants with uncomplicated minor regurgitation may be assessed as fit. Regular cardiological follow-up including 2D echocardiography may be required.

(iii) Applicants with mitral valve prolapse and mild mitral regurgitation may be assessed as fit.

(iv) Applicants with evidence of volume overloading of the left ventricle demonstrated by increased left ventricular end-diastolic diameter should be assessed as unfit.

(f) Valvular surgery

Applicants with cardiac valve replacement/repair should be assessed as unfit. After a satisfactory cardiological evaluation, fit assessment may be considered.

(1) Asymptomatic applicants may be assessed as fit by the Authority six months after valvular surgery subject to:

(i) normal valvular and ventricular function as judged by 2D Doppler echocardiography;

(ii) satisfactory symptom-limited exercise ECG or equivalent;

(iii) demonstrated absence of coronary artery disease unless this has been satisfactorily treated by re-vascularisation;

(iv) no cardioactive medication is required;

(v) annual cardiological follow-up to include an exercise ECG and 2D Doppler echocardiography. Longer periods may be acceptable once a stable condition has been confirmed by cardiological evaluations.

(2) Applicants with implanted mechanical valves may be assessed as fit subject to documented exemplary control of their anti-coagulant therapy. Age factors should form part of the risk assessment.

(g) Thromboembolic disorders

Applicants with arterial or venous thrombosis or pulmonary embolism should be assessed as unfit during the first six months of anticoagulation. A fit assessment, with a limitation if necessary, may be considered by the Authority after six months of stable anticoagulation.

Anticoagulation should be considered stable if, within the last six months, at least five international normalised ratio (INR) values are documented, of which at least four are within the INR target range and the haemorrhagic risk is acceptable.

In cases of anticoagulation medication not requiring INR monitoring, a fit assessment may be considered after review by the Authority after a period of three months. Applicants with pulmonary embolism should also be evaluated by a cardiologist. Following cessation of anticoagulant therapy, for any indication, applicants should undergo a reassessment by the Authority.

(h) Other cardiac disorders

(1) Applicants with a primary or secondary abnormality of the pericardium, myocardium or endocardium should be assessed as unfit. A fit assessment may be considered following complete resolution and satisfactory cardiological evaluation which may include 2D Doppler echocardiography, exercise ECG, 24-hour ambulatory ECG, and/or myocardial perfusion scan or equivalent test. Coronary angiography may be indicated. Regular cardiological follow-up may be required.

(2) Applicants with a congenital abnormality of the heart should be assessed as unfit. Applicants following surgical correction or with minor abnormalities that are functionally unimportant may be assessed as fit following cardiological assessment. No cardioactive medication is acceptable. Investigations may include 2D Doppler echocardiography, exercise ECG and 24-hour ambulatory ECG. Regular cardiological follow-up may be required.

(i) Syncope

(1) Applicants with a history of recurrent episodes of syncope should be assessed as unfit. A fit assessment may be considered after a sufficient period of time without recurrence provided cardiological evaluation is satisfactory.

(2) A cardiological evaluation should include:

(i) a satisfactory symptom exercise ECG. If the exercise ECG is abnormal, a myocardial perfusion scan or equivalent test should be required;

(ii) a 2D Doppler echocardiogram showing neither significant selective chamber enlargement nor structural or functional abnormality of the heart, valves or myocardium;

(iii) a 24-hour ambulatory ECG recording showing no conduction disturbance, complex or sustained rhythm disturbance or evidence of myocardial ischaemia;

(iv) a tilt test carried out to a standard protocol showing no evidence of vasomotor instability.

(3) Neurological review should be required.

(j) Blood pressure

(1) Anti-hypertensive treatment should be agreed by the Authority. Medication may include:

(i) non-loop diuretic agents;

(ii) Angiotensin Converting Enzyme (ACE) inhibitors;

(iii) angiotensin II receptor blocking agents;

(iv) long-acting slow channel calcium blocking agents;

(v) certain (generally hydrophilic) beta-blocking agents.

(2) Following initiation of medication for the control of blood pressure, applicants should be re- assessed

to verify that the treatment is compatible with the safe exercise of the privileges of the licence.

(k) Coronary artery disease

(1) Applicants with chest pain of an uncertain cause should undergo a full investigation before a fit assessment may be considered. Applicants with angina pectoris should be assessed as unfit, whether or not it is abolished by medication.

(2) Applicants with suspected asymptomatic coronary artery disease should undergo a cardiological evaluation including exercise ECG. Further tests (myocardial perfusion scanning, stress echocardiography, coronary angiography or equivalent) may be required, which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(3) After an ischaemic cardiac event, including revascularisation, applicants without symptoms should have reduced any vascular risk factors to an appropriate level. Medication, when used to control cardiac symptoms, is not acceptable. All applicants should be on acceptable secondary prevention treatment.

(i) A coronary angiogram obtained around the time of, or during, the ischaemic myocardial event and a complete, detailed clinical report of the ischaemic event and of any operative procedures should be available.

(A) there should be no stenosis more than 50 % in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel subtending a myocardial infarction;

(B) the whole coronary vascular tree should be assessed as satisfactory by a cardiologist, and particular attention should be paid to multiple stenoses and/or multiple revascularisations;

(C) an untreated stenosis greater than 30 % in the left main or proximal left anterior descending coronary artery should not be acceptable.

(ii) At least six months from the ischaemic myocardial event, including revascularisation, the following investigations should be completed:

(A) an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm or conduction disturbance;

(B) an echocardiogram or equivalent test showing satisfactory left ventricular function with no important abnormality of wall motion (such as dyskinesia or akinesia) and a left ventricular ejection fraction of 50 % or more;

(C) in cases of angioplasty/stenting, a myocardial perfusion scan or equivalent test, which should show no evidence of reversible myocardial ischaemia. If there is any doubt about myocardial perfusion, in other cases (infarction or bypass grafting), a perfusion scan should also be required;

(D) further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.

(iii) Follow-up should be conducted annually (or more frequently, if necessary) to ensure that there is no deterioration of the cardiovascular status. It should include a cardiological evaluation, exercise ECG and cardiovascular risk assessment. Additional investigations may be required.

(iv) After coronary artery vein bypass grafting, a myocardial perfusion scan or equivalent test should be performed on clinical indication, and in all cases within five years from the procedure.

(v) In all cases, coronary angiography, or an equivalent test, should be considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.

(vi) Applicants may be assessed as fit after successful completion of the three-month or subsequent review.

(l) Rhythm and conduction disturbances

(1) Applicants with any significant rhythm or conduction disturbance may be assessed as fit after cardiological evaluation and with appropriate follow-up. Such evaluation should include:

(i) exercise ECG which should show no significant abnormality of rhythm or conduction, and no evidence of myocardial ischaemia. Withdrawal of cardioactive medication prior to the test should be required;

(ii) 24-hour ambulatory ECG which should demonstrate no significant rhythm or conduction disturbance;

(iii) 2D Doppler echocardiogram which should show no significant selective chamber enlargement or significant structural or functional abnormality, and a left ventricular ejection fraction of at least 50 %.

Further evaluation may include:

(iv) 24-hour ECG recording repeated as necessary;

(v) electrophysiological study;

(vi) myocardial perfusion imaging or equivalent test;

(vii) cardiac magnetic resonance imaging (MRI) or equivalent test;

(viii) coronary angiogram or equivalent test.

(2) Applicants with supraventricular or ventricular ectopic complexes on a resting ECG may require no further evaluation, provided the frequency can be shown to be no greater than one per minute, for example on an extended ECG strip.

Applicants with asymptomatic isolated uniform ventricular ectopic complexes may be assessed as fit, but frequent or complex forms require full cardiological evaluation.

(3) Where anticoagulation is needed for a rhythm disturbance, a fit assessment may be considered if the haemorrhagic risk is acceptable and the anticoagulation is stable. Anticoagulation should be considered stable if, within the last six months, at least five INR values are documented, of which at least four are within the INR target range. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment with an appropriate limitation may be considered after review by the Authority after a period of three months.

(4) Ablation

(i) Applicants who have undergone ablation therapy should be assessed as unfit for a minimum period of two months.

(ii) A fit assessment may be considered following successful catheter ablation provided an electrophysiological study (EPS) demonstrates satisfactory control has been achieved.

(iii) Where EPS is not performed, longer periods of unfitness and cardiological follow-up should be considered.

(iv) Follow-up should include a cardiological review.

(5) Supraventricular arrhythmias

Applicants with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, should be assessed as unfit. A fit assessment may be considered if cardiological evaluation is satisfactory.

(i) For initial applicants with atrial fibrillation/flutter, a fit assessment should be limited to those with a single episode of arrhythmia which is considered to be unlikely to recur.

(ii) For revalidation, applicants may be assessed as fit if cardiological evaluation is satisfactory and the stroke risk is sufficiently low. A fit assessment may be considered after a period of stable anticoagulation as prophylaxis, after review by the Authority. Anticoagulation should be considered stable if, within the last six months, at least five INR values are documented, of which at least four are within the INR target range. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment may be considered after review by the Authority after a period of three months.

(iii) Applicants with asymptomatic sinus pauses up to 2.5 seconds on a resting ECG may be assessed as fit if exercise ECG, 2D echocardiography and 24-hour ambulatory ECG are satisfactory.

(iv) Applicants with symptomatic sino-atrial disease should be assessed as unfit.

(6) Mobitz type 2 atrio-ventricular block

Applicants with Mobitz type 2 AV block may be assessed as fit after a full cardiological evaluation confirms the absence of distal conducting tissue disease.

(7) Complete right bundle branch block

Applicants with complete right bundle branch block should require cardiological evaluation on first presentation.

(8) Complete left bundle branch block

A fit assessment may be considered as follows:

(i) Initial applicants may be assessed as fit after full cardiological evaluation showing no pathology. Depending on the clinical situation, a period of stability may be required.

(ii) Applicants for revalidation or renewal of a medical certificate with a de-novo left bundle branch block may be assessed as fit after cardiological evaluation showing no pathology. A period of stability may be required.

(iii) A cardiological evaluation should be required after 12 months in all cases.

(9) Ventricular pre-excitation

Applicants with pre-excitation may be assessed as fit if they are asymptomatic, and an electrophysiological study, including an adequate drug-induced autonomic stimulation protocol, reveals no inducible re-entry tachycardia and the existence of multiple pathways is excluded. Cardiological follow-up should be required including a 24-hour ambulatory ECG recording showing no tendency to symptomatic or asymptomatic tachy-arrhythmia.

(10) Pacemaker

Applicants with a subendocardial pacemaker may be assessed as fit three months after insertion provided:

(i) there is no other disqualifying condition;

(ii) bipolar lead systems programmed in bipolar mode without automatic mode change have been used;

(iii) that the applicant is not pacemaker dependent;

(iv) regular cardiological follow-up should include a symptom-limited exercise ECG that shows no abnormality or evidence of myocardial ischaemia.

(11) QT prolongation

Applicants with asymptomatic QT-prolongation may be assessed as fit subject to a satisfactory cardiological evaluation.

(12) Brugada pattern on electrocardiography

Applicants with a Brugada pattern Type 1 should be assessed as unfit. Applicants with Type 2 or Type 3 may be assessed as fit, with limitations as appropriate, subject to satisfactory cardiological evaluation.

**GM1 2.010 Cardiovascular system**
MITRAL VALVE DISEASE

(a) Minor regurgitation should have evidence of no thickened leaflets or flail chordae and left atrial internal diameter of less than or equal to 4.0 cm.

(b) The following may indicate severe regurgitation:

(1) LV internal diameter (diastole) > 6.0 cm; or

(2) LV internal diameter (systole) > 4.1 cm; or

(3) Left atrial internal diameter > 4.5 cm.

(c) Doppler indices, such as width of jet, backwards extension and whether there is flow reversal in the pulmonary veins may be helpful in assessing severity of regurgitation.

**GM2 2.010 Cardiovascular system**
VENTRICULAR PRE-EXCITATION

(a) Asymptomatic applicants with pre-excitation may be assessed as fit at revalidation with an Operational Multi-pilot Limitation (OML) if they meet the following criteria:

(1) no inducible re-entry;

(2) refractory period > 300 ms;

(3) no induced atrial fibrillation.

(b) There should be no evidence of multiple accessory pathways.

**GM3 2.010 Cardiovascular system**
COMPLETE LEFT BUNDLE BRANCH BLOCK

Left bundle branch block is more commonly associated with coronary artery disease and, thus, requires more in-depth investigation, which may be invasive.

**GM4 2.010 Cardiovascular system**
PACEMAKER

(a) Scintigraphy may be helpful in the presence of conduction disturbance/paced complexes in the resting ECG.

(b) Experience has shown that any failures of pacemakers are most likely to occur in the first three months after being fitted. Therefore, a fit assessment should not be considered before this period has elapsed.

(c) It is known that certain operational equipment may interfere with the performance of the pacemaker. The type of pacemaker used, therefore, should have been tested to ensure it does not suffer from interference in the operational environment. Supporting data and a performance statement to this effect should be available from the supplier.

**GM5 2.010 Cardiovascular system**
ANTICOAGULATION

Applicants and licence holders taking anticoagulant medication which requires monitoring with INR testing, should measure their INR on a 'near patient' testing system within 12 hours prior to starting a shift pattern and then at least every three days during the shift pattern. The privileges of the licence should only be exercised if the INR is within the target range. The INR result should be recorded and the results should be reviewed at each aero-medical assessment.

**AMC3 2.015 Respiratory system**

(a) Examination

(1) Spirometric examination is required for initial examination. An FEV1/FVC ratio less than 70 % should require evaluation by a specialist in respiratory disease before a fit assessment can be considered.

(2) Posterior/anterior chest radiography may be required at initial, revalidation or renewal examinations when indicated on clinical or epidemiological grounds.

(b) Chronic obstructive airways disease

Applicants with chronic obstructive airways disease should be assessed as unfit. Applicants with only minor impairment of their pulmonary function may be assessed as fit after specialist respiratory evaluation. Applicants with pulmonary emphysema may be assessed as fit following specialist evaluation showing that the condition is stable and not causing significant symptoms.

(c) Asthma

Applicants with asthma requiring medication or experiencing recurrent attacks of asthma may be assessed as fit if the asthma is considered stable with satisfactory pulmonary function tests and medication is compatible with the safe execution of the privileges of the licence. Use of low dose systemic steroids may be acceptable.

(d) Inflammatory disease

(1) For applicants with active inflammatory disease of the respiratory system, a fit assessment may be considered when the condition has resolved without sequelae and no medication is required.

(2) Applicants with chronic inflammatory diseases may be assessed as fit following specialist evaluation showing mild disease with acceptable pulmonary function test and medication compatible with the safe execution of the privileges of the licence.

(e) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Specialist evaluation should be undertaken with respect to the possibility of systemic, particularly cardiac, involvement. A fit assessment may be considered if no medication is required, and the disease is limited to hilar lymphadenopathy and inactive. Use of low dose systemic steroids may be acceptable.

(2) Applicants with cardiac or neurological sarcoid should be assessed as unfit.

(f) Pneumothorax

Applicants with a spontaneous pneumothorax should be assessed as unfit. A fit assessment may be considered:

(1) six weeks after the event provided full recovery from a single event has been confirmed in a full respiratory evaluation including a CT scan or equivalent;

(2) following surgical intervention in the case of a recurrent pneumothorax provided there is satisfactory

recovery.

(g) Thoracic surgery

(1) Applicants requiring thoracic surgery should be assessed as unfit until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the licence.

(2) A fit assessment may be considered after satisfactory recovery and full respiratory evaluation including a CT scan or equivalent. The underlying pathology which necessitated the surgery should be considered in the aero-medical assessment.

(h) Sleep apnoea syndrome/sleep disorder

(1) Applicants with unsatisfactorily treated sleep apnoea syndrome and suffering from excessive daytime sleepiness should be assessed as unfit.

(2) A fit assessment may be considered subject to the extent of symptoms, including vigilance, and satisfactory treatment. ATCO operational experience, sleep apnoea syndrome/sleep disorder education and work place considerations are essential components of the medical assessment.

**AMC3 2.020 Digestive system**

(a) Oesophageal varices

Applicants with oesophageal varices should be assessed as unfit.

(b) Pancreatitis

(1) Applicants with pancreatitis should be assessed as unfit. A fit assessment may be considered if the cause (e.g. gallstone, other obstruction, medication) is removed.

(2) Alcohol may be a cause of dyspepsia and pancreatitis. If considered appropriate, a full evaluation of its use or misuse should be undertaken.

(c) Gallstones

(1) Applicants with a single large gallstone may be assessed as fit after evaluation.

(2) Applicants with multiple gallstones may be assessed as fit while awaiting treatment provided the symptoms are unlikely to interfere with the safe exercise of the privileges of the licence.

(d) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease may be assessed as fit if the disease is in established stable remission, and only minimal, if any, medication is being taken. Regular follow-up should be required.

(e) Dyspepsia

Applicants with recurrent dyspepsia requiring medication should be investigated by internal examination including radiologic or endoscopic examination. Laboratory testing should include haemoglobin assessment and faecal examination. Any demonstrated ulceration or significant inflammation requires evidence of recovery before a fit assessment may be considered.

(f) Digestive tract and abdominal surgery

Applicants who have undergone a surgical operation on the digestive tract or its adnexa, including a total or partial excision or a diversion of any of these organs, should be assessed as unfit. A fit assessment may be considered if recovery is complete, the applicant is asymptomatic and the risk of secondary complication or recurrence is minimal.

**AMC3 2.025 Metabolic and endocrine system**

(a) Metabolic, nutritional or endocrine dysfunction

Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit if the condition is asymptomatic, clinically compensated and stable with or without replacement therapy, and regularly reviewed by an appropriate specialist.

(b) Obesity

(1) Applicants with a Body Mass Index > 35 may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the privileges of the licence and a satisfactory cardiovascular risk review and evaluation of the possibility of sleep apnoea syndrome has been undertaken.

(2) Functional testing in the working environment may be necessary before a fit assessment may be considered.

(c) Thyroid dysfunction

Applicants with hyperthyroidism or hypothyroidism should attain a stable euthyroid state before a fit assessment may be considered.

(d) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance without diabetic pathology is fully controlled by diet and regularly reviewed.

(e) Diabetes mellitus

(1) The following medication, alone and in combination, may be acceptable for control of type 2 diabetes:

(i) alpha-glucosidase inhibitors;

(ii) medication that acts on the incretin pathway;

(iii) biguanides.

(2) A fit assessment may be considered after evaluation of the operational environment, including means of glucose monitoring/management whilst performing rated duties, and with demonstrated exemplary glycaemic control.

(3) Annual follow-up by a specialist should be required including demonstration of absence of complications, good glycaemic control demonstrated by six-monthly HbA1c measurements, and a normal exercise tolerance test.

**AMC3 2.030 Haematology**

(a) Anaemia

(1) Anaemia demonstrated by a reduced haemoglobin level should require investigation. A fit assessment may be considered in cases where the primary cause has been treated (e.g. iron or B12 deficiency) and the haemoglobin or haematocrit has stabilised at a satisfactory level. The recommended range of the haemoglobin level is 11–17 g/dl.

(2) Anaemia which is unamenable to treatment should be disqualifying.

(b) Haemoglobinopathy

Applicants with a haemoglobinopathy should be assessed as unfit. A fit assessment may be considered where minor thalassaemia, sickle cell disease or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated.

(c) Coagulation disorders

(1) Significant coagulation disorders require investigation. A fit assessment may be considered if there is no history of significant bleeding or clotting episodes and the haematological data indicate that it is safe to do so.

(2) If anticoagulant therapy is prescribed, AMC 2.010(g) should be followed.

(d) Disorders of the lymphatic system

Lymphatic enlargement requires investigation. A fit assessment may be considered in cases of an acute infectious process which is fully recovered, or Hodgkin's lymphoma, or other lymphoid malignancy which has been treated and is in full remission, or that requires minimal or no treatment.

(e) Leukaemia

(1) Applicants with acute leukaemia should be assessed as unfit. Once in established remission, applicants may be assessed as fit.

(2) Applicants with chronic leukaemia should be assessed as unfit. A fit assessment may be considered after remission and a period of demonstrated stability.

(3) Applicants with a history of leukaemia should have no history of central nervous system involvement and no continuing side effects from treatment which are likely to interfere with the safe exercise of the privileges of the licence. Haemoglobin and platelet levels should be satisfactory.

(4) Regular follow-up is required in all cases of leukaemia.

(f) Splenomegaly

Splenomegaly requires investigation. A fit assessment may be considered if the enlargement is minimal, stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

**GM1 2.030 Haematology**
HODGKIN'S LYMPHOMA

Due to potential side effects of specific chemotherapeutic agents, the precise regime utilised should be taken into account.

**GM2 2.030 Haematology**
CHRONIC LEUKAEMIA

A fit assessment may be considered if the chronic leukaemia has been diagnosed as:

(a) lymphatic at stages 0, I, and possibly II without anaemia and minimal treatment; or

(b) stable 'hairy cell' leukaemia with normal haemoglobin and platelets.

**GM3 2.030 Haematology**
SPLENOMEGALY

(a) Splenomegaly should not preclude a fit assessment, but should be assessed on an individual basis.

(b) Associated pathology of splenomegaly is e.g. treated chronic malaria.

(c) An acceptable condition associated with splenomegaly is e.g. Hodgkin's lymphoma in remission.

**AMC3 2.035 Genitourinary system**

(a) Abnormal urinalysis

Any abnormal finding on urinalysis requires investigation. This investigation should include proteinuria, haematuria and glycosuria.

(b) Renal disease

(1) Applicants presenting with any signs of renal disease should be assessed as unfit. A fit assessment may be considered if blood pressure is satisfactory and renal function is acceptable.

(2) Applicants requiring dialysis should be assessed as unfit.

(c) Urinary calculi

(1) Applicants with an asymptomatic calculus or a history of renal colic require investigation. A fit assessment may be considered after successful treatment for a calculus and with appropriate follow-up.

(2) Residual calculi should be disqualifying unless they are in a location where they are unlikely to move and give rise to symptoms.

(d) Renal and urological surgery

(1) Applicants who have undergone a major surgical operation on the genitourinary system or its adnexa involving a total or partial excision or a diversion of any of its organs should be assessed as unfit until recovery is complete, the applicant is asymptomatic and the risk of secondary complications is minimal.

(2) Applicants with compensated nephrectomy without hypertension or uraemia may be assessed as fit.

(3) Applicants who have undergone renal transplantation may be considered for a fit assessment if it is fully compensated and tolerated with only minimal immuno-suppressive therapy after at least 12 months.

(4) Applicants who have undergone total cystectomy may be considered for a fit assessment if there is satisfactory urinary function, no infection and no recurrence of primary pathology.

**AMC3 2.040 Infectious disease**

(a) Infectious disease — General

In cases of infectious disease, consideration should be given to a history of, or clinical signs indicating, underlying impairment of the immune system.

(b) Tuberculosis

(1) Applicants with active tuberculosis should be assessed as unfit. A fit assessment may be considered following completion of therapy.

(2) Applicants with quiescent or healed lesions may be assessed as fit. Specialist evaluation should consider the extent of the disease, the treatment required and possible side effects of medication.

(c) Syphilis

Applicants with acute syphilis should be assessed as unfit. A fit assessment may be considered in the case of those fully treated and recovered from the primary and secondary stages.

(d) HIV positivity

(1) Applicants who are HIV positive may be assessed as fit if a full investigation provides no evidence of HIV associated diseases that might give rise to incapacitating symptoms. Frequent review of the immunological status and neurological evaluation by an appropriate specialist should be carried out. A cardiological review may also be required depending on medication.

(2) Applicants with an AIDS defining condition should be assessed as unfit except in individual cases for revalidation of a medical certificate after complete recovery and dependent on the review.

(3) The aero-medical assessment of individual cases under (1) and (2) should be dependent on the absence of symptoms or signs of the disease and the acceptability of serological markers. Treatment should be evaluated by a specialist on an individual basis for its appropriateness and any side effects.

(e) Infectious hepatitis

Applicants with infectious hepatitis should be assessed as unfit. A fit assessment may be considered once

the applicant has become asymptomatic after treatment and specialist evaluation. Regular review of the liver function should be carried out.

**GM1 2.040 Infectious disease**
HIV INFECTION

(a) There is no requirement for routine testing of HIV status, but testing may be carried out on clinical indication.

(b) If HIV positivity has been confirmed, a process of rigorous aero-medical assessment and follow-up should be introduced to enable individuals to continue working provided their ability to exercise their licenced privileges to the required level of safety is not impaired. The operational environment should be considered in the decision-making.

**AMC3 2.045 Obstetrics and gynaecology**

(a) Gynaecological surgery

Applicants who have undergone a major gynaecological operation should be assessed as unfit until recovery is complete, the applicant is asymptomatic and the risk of secondary complications or recurrence is minimal.

(b) Pregnancy

(1) A pregnant licence holder may be assessed as fit during the first 34 weeks of gestation provided obstetric evaluation continuously indicates a normal pregnancy.

(2) The AeMC or AME or the Authority should provide written advice to the applicant and the supervising physician regarding potentially significant complications of pregnancy which may negatively influence the safe exercise of the privileges of the licence.

**AMC3 2.050 Musculoskeletal system**

(a) Applicants with any significant sequelae from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery require full evaluation prior to a fit assessment.

(b) Abnormal physique, including obesity, or muscular weakness may require aero-medical assessment and particular attention should be paid to an aero-medical assessment in the working environment.

(c) Locomotor dysfunction, amputations, malformations, loss of function and progressive osteoarthritic disorders should be assessed on an individual basis in conjunction with the appropriate operational expert with a knowledge of the complexity of the tasks of the applicant.

(d) Applicants with inflammatory, infiltrative or degenerative disease of the musculoskeletal system may be assessed as fit provided the condition is in remission and the medication is acceptable.

**AMC3 2.055 Psychiatry**

(a) Disorders due to alcohol or other substance use

(1) A fit assessment may be considered after successful treatment, a period of documented sobriety or freedom from substance use, and review by a psychiatric specialist. The Authority, with the advice of the psychiatric specialist, should determine the duration of the period to be observed before a medical certificate can be issued.

(2) Depending on the individual case, treatment may include in-patient treatment of some weeks.
(3) Continuous follow-up, including blood testing and peer reports, may be required indefinitely.

(b) Mood disorder

Applicants with an established mood disorder should be assessed as unfit. After full recovery and after full consideration of an individual case, a fit assessment may be considered depending on the characteristics and gravity of the mood disorder. If stability on maintenance psychotropic medication is confirmed, a fit assessment with an appropriate limitation may be considered. If the dosage of the medication is changed, a further period of unfit assessment should be required. Regular specialist supervision should be required.

(c) Psychotic disorder

Applicants with a history, or the occurrence, of a functional psychotic disorder should be assessed as unfit. A fit assessment may be considered if a cause can be unequivocally identified as one which is transient, has ceased and the risk of recurrence is minimal.

(d) Deliberate self-harm

Applicants who have carried out a single self-destructive action or repeated acts of deliberate self- harm should be assessed as unfit. A fit assessment may be considered after full consideration of an individual case which may require psychiatric or psychological evaluation. Neuropsychological evaluation may also be required.

**AMC3 2.060 Psychology**

(a) If a psychological evaluation is indicated, it should be carried out by a psychologist taking into account the ATC environment and the associated risks.

(b) Where there is established evidence that an applicant may have a psychological disorder, the applicant should be referred for psychological opinion and advice.

(c) Established evidence should be verifiable information from an identifiable source related to the mental fitness or personality of a particular individual. Sources for this information can be accidents or incidents, problems in training or competence assessments, behaviour or knowledge relevant to the safe exercise of the privileges of the licence.

(d) The psychological evaluation may include a collection of biographical data, the administration of aptitude, as well as personality tests and psychological interview.

(e) The psychologist should submit a written report to the AME, AeMC or Authority as appropriate, detailing his/her opinion and recommendation.

**AMC3 2.065 Neurology**

(a) Electroencephalography (EEG)

(1) EEG should be carried out when indicated by the applicant's history or on clinical grounds.

(2) Epileptiform paroxysmal EEG abnormalities and focal slow waves should be disqualifying. A fit assessment may be considered after further evaluation.

(b) Epilepsy

(1) Applicants who have experienced one or more convulsive episodes after the age of five should be assessed as unfit.

(2) A fit assessment may be considered if:

(i) the applicant is seizure free and off medication for a period of at least 10 years;

(ii) full neurological evaluation shows that a seizure was caused by a specific non- recurrent cause, such as trauma or toxin.

(3) Applicants who have experienced an episode of benign Rolandic seizure may be assessed as fit provided the seizure has been clearly diagnosed including a properly documented history and typical EEG result and the applicant has been free of symptoms and off treatment for at least 10 years.

(c) Neurological disease

Applicants with any stationary or progressive disease of the nervous system which has caused or is likely to cause a significant disability should be assessed as unfit. A fit assessment may be considered after full neurological evaluation in cases of minor functional losses associated with stationary disease.

(d) Disturbance of consciousness

Applicants with a history of one or more episodes of disturbed consciousness may be assessed as fit if the condition can be satisfactorily explained by a non-recurrent cause. A full neurological evaluation is required.

(e) Head injury

Applicants with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury should be evaluated by a consultant neurologist. A fit assessment may be considered if there has been a full recovery and the risk of epilepsy is sufficiently low. Behavioural and cognitive aspects should be taken into account.

**AMC3 2.070 Visual system**

(a) Eye examination

(1) At each aero-medical revalidation examination, the visual fitness should be assessed and the eyes should be examined with regard to possible pathology.

(2) All abnormal and doubtful cases should be referred to an ophthalmologist. Conditions which indicate ophthalmological examination include but are not limited to a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity and/or the occurrence of eye disease, eye injury or eye surgery.

(3) Where ophthalmological examinations are required for any significant reason, this should be imposed as a limitation on the medical certificate.

(4) The effect of multiple eye conditions should be evaluated by an ophthalmologist with regard to possible cumulative effects. Functional testing in the working environment may be necessary to consider a fit assessment.

(5) Visual acuity should be tested using Snellen charts, or equivalent, under appropriate illumination. Where clinical evidence suggests that Snellen may not be appropriate, Landolt ‘C’ may be used.

(b) Comprehensive eye examination

A comprehensive eye examination by an eye specialist is required at the initial examination. All abnormal and doubtful cases should be referred to an ophthalmologist. The examination should include:

(1) history;

(2) visual acuities — near, intermediate and distant vision; uncorrected and with best optical correction if needed;

(3) objective refraction — hyperopic initial applicants with a hyperopia of more than +2 dioptres and under the age of 25 in cycloplegia;

(4) ocular motility and binocular vision;

(5) colour vision;

(6) visual fields;

(7) tonometry;

(8) examination of the external eye, anatomy, media (slit lamp) and fundoscopy;

(9) assessment of contrast and glare sensitivity.

(c) Routine eye examination

At each revalidation or renewal examination, the visual fitness should be assessed and the eyes should be examined with regard to possible pathology. All abnormal and doubtful cases should be referred to an ophthalmologist. This routine eye examination should include:

(1) history;

(2) visual acuities — near, intermediate and distant vision; uncorrected and with best optical correction if needed;

(3) morphology by ophthalmoscopy;

(4) further examination on clinical indication.

(d) Refractive error

(1) Applicants with a refractive error between +5.0/-6.0 dioptres may be assessed as fit provided optimal correction has been considered and no significant pathology is demonstrated. If the refractive error exceeds +3.0/-3.0 dioptres, a four-yearly follow-up by an eye specialist should be required.

(2) Applicants with:

(i) a refractive error exceeding -6 dioptres;

(ii) an astigmatic component exceeding 3 dioptres; or

(iii) anisometropia exceeding 3 dioptres; may be considered for a fit assessment if:

(A) no significant pathology can be demonstrated;

(B) optimal correction has been considered;

(C) visual acuity is at least 6/6 (1.0) in each eye separately with normal visual fields while wearing the optimal spectacle correction;

(D) two-yearly follow-up is undertaken by an eye specialist.

(3) Applicants with hypermetropia exceeding +5.0 dioptres may be assessed as fit subject to a satisfactory ophthalmological evaluation provided there are adequate fusional reserves, normal intraocular pressures and anterior angles and no significant pathology has been demonstrated. Corrected visual acuity in each eye shall be 6/6 or better.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

(e) Convergence

Applicants with convergence outside the normal range may be assessed as fit provided it does not interfere with near vision (30–50 cm) or intermediate vision (100 cm) with or without correction.

(f) Substandard vision

(1) Applicants with reduced central vision in one eye may be assessed as fit for a revalidation or renewal of a medical certificate if the binocular visual field is normal and the underlying pathology is acceptable according to ophthalmological evaluation. Testing should include functional testing in the appropriate working environment.

(2) Applicants with acquired substandard vision in one eye (monocularity, functional monocular vision including eye muscle imbalance) may be assessed as fit for revalidation or renewal if the ophthalmological examination confirms that:

(i) the better eye achieves distant visual acuity of 1.0 (6/6), corrected or uncorrected;

(ii) the better eye achieves intermediate and near visual acuity of 0.7 (6/9), corrected or uncorrected;

(iii) there is no significant ocular pathology;

(iv) a functional test in the working environment is satisfactory; and

(v) in the case of acute loss of vision in one eye, a period of adaptation time has passed from the known point of visual loss, during which the applicant is assessed as unfit.

(3) An applicant with a monocular visual field defect may be assessed as fit if the binocular visual fields are normal.

(g) Keratoconus

Applicants with keratoconus may be considered for a fit assessment if the visual requirements are met with the use of corrective lenses and periodic review is undertaken by an ophthalmologist.

(h) Heterophoria

Applicants with heterophoria (imbalance of the ocular muscles) exceeding when measured with optimal correction, if prescribed:

(1) at six metres:

2.0 prism dioptres in hyperphoria,

10.0 prism dioptres in esophoria,

8.0 prism dioptres in exophoria and

(2) at 33 centimetres:

1.0 prism dioptre in hyperphoria,

8.0 prism dioptres in esophoria,

12.0 prism dioptres in exophoria

may be assessed as fit provided that orthoptic evaluation demonstrates that the fusional reserves are sufficient to prevent asthenopia and diplopia. The Netherlands Optical Society (TNO) testing or equivalent should be carried out to demonstrate fusion.

(i) Eye surgery

(1) After refractive surgery or surgery of the cornea including cross linking, a fit assessment may be considered, provided:

(i) satisfactory stability of refraction has been achieved (less than 0.75 dioptres variation diurnally);

(ii) examination of the eye shows no post-operative complications;

(iii) glare sensitivity is normal;

(iv) mesopic contrast sensitivity is not impaired;

(v) evaluation is undertaken by an ophthalmologist.

(2) Cataract surgery

Following intraocular lens surgery, including cataract surgery, a fit assessment may be considered once recovery is complete and the visual requirements are met with or without correction. Intraocular lenses should be monofocal and should not impair colour vision.

(3) Retinal surgery/retinal laser therapy

(i) After successful retinal surgery, applicants may be assessed as fit once the recovery is complete. Annual ophthalmological follow-up may be necessary. Longer periods may be acceptable after two years on recommendation of the ophthalmologist.

(ii) After successful retinal laser therapy, applicants may be assessed as fit provided an ophthalmological evaluation shows stability.

(4) Glaucoma surgery

A fit assessment may be considered six months after successful glaucoma surgery, or earlier if recovery is complete. Six-monthly ophthalmological examinations to follow up secondary complications caused by the glaucoma may be necessary.

(5) Extraocular muscle surgery

A fit assessment may be considered not less than six months after surgery and after a satisfactory ophthalmological evaluation.

(j) Visual correction

Spectacles should permit the licence holder to meet the visual requirements at all distances.

**GM1 2.070 Visual system**
COMPARISON OF DIFFERENT READING CHARTS (APPROXIMATE FIGURES)

(a) Test distance: 40 cm

| Decimal | Nieden | Jäger | Snellen | N | Parinaud |
|---|---|---|---|---|---|
| 1,0 | 1 | 2 | 1,5 | 3 | 2 |
| 0,8 | 2 | 3 | 2 | 4 | 3 |
| 0,7 | 3 | 4 | 2,5 | | |
| 0,6 | 4 | 5 | 3 | 5 | 4 |
| 0,5 | 5 | 5 | | 6 | 5 |
| 0,4 | 7 | 9 | 4 | 8 | 6 |
| 0,35 | 8 | 10 | 4,5 | | 8 |
| 0,32 | 9 | 12 | 5,5 | 10 | 10 |
| 0,3 | 9 | 12 | | 12 | |
| 0,25 | 9 | 12 | | 14 | |
| 0,2 | 10 | 14 | 7,5 | 16 | 14 |
| 0,16 | 11 | 14 | 12 | 20 | |

(b) Test distance: 80 cm

| Decimal | Nieden | Jäger | Snellen | N | Parinaud |
|---|---|---|---|---|---|
| 1,2 | 4 | 5 | 3 | 5 | 4 |
| 1,0 | 5 | 5 | | 6 | 5 |
| 0,8 | 7 | 9 | 4 | 8.0 | 6 |

| | | | | | |
|---|---|---|---|---|---|
| 0,7 | 8 | 10 | 4,5 | | 8 |
| 0,63 | 9 | 12 | 5,5 | 10 | 10 |
| 0,6 | 9 | 12 | | 12 | 10 |
| 0,5 | 9 | 12 | | 14 | 10 |
| 0,4 | 10 | 14 | 7,5 | 16 | 14 |
| 0,32 | 11 | 14 | 12 | 20 | 14 |

**AMC3 2.075 Colour vision**

(a) Pseudoisochromatic plate testing alone is not sufficient.

(b) Colour vision should be assessed using means to demonstrate normal trichromacy.

**GM1 2.075 Colour vision**

The means to demonstrate normal trichromacy include:

(a) anomaloscopy (Nagel or equivalent). This test is considered passed if the colour match is trichromatic and the matching range is four scale units or less;

(b) Colour Assessment and Diagnosis (CAD) test.

**AMC3 2.080 Otorhinolaryngology**

(a) Examination

(1) An otorhinolaryngological examination includes:

(i) history;

(ii) clinical examination including otoscopy, rhinoscopy and examination of the mouth and throat;

(iii) clinical examination of the vestibular system.

(2) Ear, nose and throat (ENT) specialists involved in the aero-medical assessment of air traffic controllers should have an understanding of the functionality required by air traffic controllers whilst exercising the privileges of their licence(s).

(3) Where a full aero-medical assessment and functional check are needed, due regard should be paid to the operational environment in which the operational functions are undertaken.

(b) Hearing

(1) The follow-up of an applicant with hypoacusis should be decided by the Authority. If at the next annual test there is no indication of further deterioration, the normal frequency of testing may be resumed.

(2) An appropriate prosthetic aid may be a special headset with individual earpiece volume controls. Full functional and environmental assessments should be carried out with the chosen prosthetic equipment in use.

(c) Ear conditions

An applicant with a single dry perforation of non-infectious origin and which does not interfere with the normal function of the ear may be considered for a fit assessment.

(d) Vestibular disturbance

The presence of vestibular disturbance and spontaneous or positional nystagmus requires complete vestibular evaluation by a specialist. Significant abnormal caloric or rotational vestibular responses are disqualifying. At revalidation and renewal aero-medical examinations, abnormal vestibular responses should be assessed in their clinical context.

(e) Speech disorder

Applicants with a speech disorder should be assessed with due regard to the operational environment in which the operational functions are undertaken. Applicants with significant disorder of speech or voice should be assessed as unfit.

**GM1 2.080 Otorhinolaryngology**
HEARING

(a) Speech discrimination test: discriminating speech against other noise including other sources of verbal communication and ambient noise in the working environment, but not against engine noise.

(b) Functional hearing test: the objective of this test is to evaluate the controller's ability to hear the full range of communications that occur in an operational environment and not just through a headset or speaker.

(c) Prosthetic aid: the functional hearing test to be carried out with the prosthetic aid in use is to ensure that the individual is able to perform the functions of his/her licence and that the equipment is not adversely affected by interference from headsets or other factors.

(d) Pure-tone audiometry: testing at frequencies at or above 4 000 Hz will aid the early diagnosis of acoustic neuroma, noise-induced hearing loss (NIH) and other disorders of hearing. Particular attention should be paid in cases where there is a significant difference between thresholds of the left and right ear.

**AMC3 2.085 Dermatology**

(a) Referral to the Authority should be made if doubt exists about the fitness of an applicant with eczema (exogenous and endogenous), severe psoriasis, chronic infections, drug-induced or bullous eruptions or urticaria.

(b) Systemic effects of radiation or pharmacological treatment for a dermatological condition should be evaluated before a fit assessment may be considered.

(c) An applicant with a skin condition that causes pain, discomfort, irritation or itching may only be assessed as fit if the condition can be controlled and does not interfere with the safe exercise of the privileges of the licence.

(d) In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment may be considered.

**AMC3 2.090 Oncology**

(a) Applicants who have been diagnosed with a malignant disease may be assessed as fit provided:
(1) after primary treatment there is no evidence of residual malignant disease likely to interfere with the safe exercise of the privileges of the licence;

(2) time appropriate to the type of tumour has elapsed since the end of primary treatment;

(3) the risk of incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short- or long-term sequelae from treatment. Special attention should be paid to applicants who have received anthracycline chemotherapy;

(5) satisfactory oncology follow-up reports are provided to the Authority.

(b) Applicants receiving ongoing chemotherapy or radiation treatment should be assessed as unfit.

(c) Applicants with a benign intracerebral tumour may be assessed as fit after satisfactory specialist and neurological evaluation and the condition does not compromise the safe exercise of the privileges of the licence.

(d) Applicants with pre-malignant conditions may be assessed as fit if treated or excised as necessary and there is a regular follow-up.

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# CHAPTER 3

# AERO-MEDICAL EXAMINERS (AMES)

## AMC 3.010 Requirements for the issue of an AME certificate

(a) Basic training course for AMEs

The basic training course for AMEs should consist of 60 hours theoretical and practical training, including specific examination techniques.

(b) The syllabus for the basic training course should cover at least the following subjects:

- Introduction to aviation medicine;
- Basic aeronautical knowledge;
- Aviation physiology;
- Cardiovascular system;
- Respiratory system;
- Digestive system;
- Metabolic and endocrine system;
- Haematology;
- Genitourinary system;
- Obstetrics and gynaecology;
- Musculoskeletal system;
- Psychiatry;
- Psychology;
- Neurology;
- Visual system and colour vision;
- Otorhinolaryngology;
- Oncology;
- Incidents and accidents, escape and survival;
- Legislation, rules and regulations;
- Medication and air traffic control.
- Medication and flying.

## AMC 3.015 Requirements for the extension of privileges

(a) Advanced training course for AMEs

The advanced training course for AMEs should consist of another 60 hours of theoretical and practical training, including specific examination techniques.

(b) The syllabus for the advanced training course should cover at least the following subjects:

— Pilot and Air Traffic Controller working environment;

— Ophthalmology, including demonstration and practical training;

— Otorhinolaryngology, including demonstration and practical training;

— Clinical medicine;

— Cardiovascular system;

— Neurology;

— Psychiatry;

— Oncology;

— Metabolic and endocrine systems;

— Human factors in aviation with a specific focus on the air traffic control environment;

— Problematic use of substances.

(c) Practical training in an AeMC should be under the guidance and supervision of the head of the AeMC.

(d) After the successful completion of the practical training, a report of demonstrated competency should be issued.

**GM 3.030 Refresher training in aviation medicine**

(a) During the period of authorisation, an AME should attend 20 hours of refresher training.

(b) A proportionate number of refresher training hours should be provided by, or conducted under the direct supervision of the Authority or the Medical Assessor.

(c) Attendance at scientific meetings, congresses and flight deck and ATC experience may be approved by the Authority for a specified number of hours against the training obligations of the AME.

(d) Scientific meetings that should be accredited by the Authority are:

(5) European Conference of Aerospace Medicine

(6) International Academy of Aviation and Space Medicine Annual Congresses;

(3) Aerospace Medical Association Annual Scientific Meetings; and

(4) other scientific meetings, as organised or approved by the Medical Assessor.