



# Specific requirements for Class 1 Medical Certificates

**Dr. Virgilijus Valentukevicius**

**EASA Rulemaking Officer**

**Flight Standards Department**

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# Abbreviations

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AME –	Aeromedical Examiner
AeMC -	Aeromedical Centre
ECG –	Electrocardiography
CAD -	Coronary Artery Disease
OML -	Operational Multi-pilot Limitation
DQ -	Disqualification
LV -	Left Ventricle
EchoCG -	Echocardiography
CV -	Cardiovascular
LOC -	Loss of Consciousness
CABG -	Coronary Artery By-pass Grafting



# AMC / GM to PART MEDICAL

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## Subpart B: Requirements for medical certificates

### Section 1: Specific requirements for class 1 and class 2 medical certificates

#### Chapter A: AMC for Class 1 medical certificates



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AMC A to MED.B.005

# CARDIOVASCULAR SYSTEM

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## (a) Examination

Exercise ECG

- ★ **symptom limited**
- ★ **minimum of Bruce Stage IV or equivalent**

## (b) General

1. Risk factor assessment
2. Cardiovascular assessment
  - ★ **ECG – AME or other specialist**
  - ★ **Extended assessment – AeMC or cardiologist**



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## 3. Peripheral Arterial Disease

- No significant functional impairment
- Fit assessment by licensing authority
- CAD symptoms – reduced risk factors
- Acceptable secondary prevention treatment
- Exercise ECG - satisfactory



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## 4. Aortic Aneurysm (infra-renal)

- OML
- Follow-up by ultrasound
- After surgery OML (revalidation).  
Satisfactory:
  - ★ BP
  - ★ Exercise ECG
  - ★ Cardiovascular assessment
- Regular cardiological review



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## 5. Cardiac Valvular Abnormalities

- Cardiac murmurs
  - ★ evaluation by a cardiologist
  - ★ assessment by the licensing authority
- Minor cardiac valvular abnormalities
  - ★ fit by the licensing authority
  - ★ Significant - unfit



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## 5.2.1.(i) Bicuspid aortic valve

- ★ **Fit if no other abnormality**
- ★ **Authority: follow-up with EchoCG**

## 5.2.1.(ii) Aortic stenosis

- ★ **Authority review**
- ★ **LV function – intact**
- ★ **Systemic embolism, aortic dilatation – DQ**
- ★ **Pressure gradient (20, 20 – 40 OML)**
- ★ **Authority: follow-up with EchoCG**





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## 5.2.1.(iii) Aortic regurgitation

- ★ **Trivial – fit**
- ★ **Greater degree – OML**
- ★ **No demonstrable abnormality of the ascending aorta on EchoCG**
- ★ **Follow-up determined by Authority**



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## 5.2.2. Mitral Valve Disease

- ★ **Rheumatic mitral stenosis – unfit**
- ★ **Uncomplicated minor regurgitation – fit, but cardiological review by Authority**
- ★ **Uncomplicated moderate mitral regurgitation - OML**
- ★ **Volume overloading of the LV demonstrated by increased LV end-diastolic diameter - unfit**



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## 6. Valvular surgery

- ★ **Cardiac valve replacement/repair –fit by Authority**
- ★ **Aortic valvotomy – unfit**
- ★ **Mitral leaflet repair for prolapse – fit**
- ★ **Tissue valves**
  - ➔ 6 months after surgery
  - ➔ No cardioactive medication
  - ➔ Authority: fit with OML
  - ➔ Satisfactory cardiological investigations



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## 7. Thromboembolic Disorders

- ★ **Thrombosis, pulmonary embolism – DQ until anticoagulation discontinued**
- ★ **Pulmonary embolus – full evaluation**
- ★ **Authority review after anticoagulation discontinued**



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## 8.1. Abnormality of the pericardium, myocardium or endocardium - unfit

- ★ **Authority: fit after resolution and satisfactory cardiological evaluation**
- ★ **Frequent review and OML**

## 8.2. Congenital abnormality of the heart (surgery) – unfit

- ★ **Authority: fit if minor, CV assessment**
- ★ **No cardioactive medication**



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## 9. Recurrent Vasovagal Syncope

- ★ History – unfit
- ★ Authority: fit after 6 months if CV evaluation is satisfactory
- ★ Tilt test – no vasomotor instability
- ★ Neurological review
- ★ OML or 5 years
- ★ Earlier – by Authority
- ★ LOC without warning - unfit



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## (c) BLOOD PRESSURE

- ★ **Hypertension - review vascular risk factors**
- ★ **Recommended medication – as in JAR-FCL 3**
- ★ **Following the initiation of medication - applicants should be reassessed**



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## (d) CORONARY ARTERY DISEASE

- ★ Chest pain - full investigation
- ★ Suspected asymptomatic CAD - exercise ECG and further tests
- ★ Exercise induced myocardial ischaemia - unfit
- ★ After an ischaemic cardiac event – reduced vascular risk factors, no medication, on acceptable secondary prevention treatment





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## (d) CORONARY ARTERY DISEASE

- ★ 6 months from the ischaemic cardiac event, including revascularisation
- ★ Follow-up yearly
- ★ CABG (vein): perfusion scan within 5 years
- ★ Coronary angiography if ischaemia
- ★ 6 months and review - OML



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## (e) RHYTHM AND CONDUCTION DISTURBANCES

- ★ **Significant – evaluation by cardiologist**
- ★ **Frequent or complex forms of supra ventricular or ventricular ectopic complexes - full cardiological evaluation**
- ★ **Ablation – unfit. Authority: fit if successful, OML for 1 year, removed if EPS within 2 months satisfactory. Long term outcome cannot be assured – OML and/or observation**



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## 4. Supraventricular Arrhythmias

- ★ **Significant – unfit**
- ★ **Authority: fit if CV evaluation satisfactory**
- ★ **Atrial fibrillation/flutter**
  - ➔ Initial: fit if single episode, unlikely to recur
  - ➔ Revalidation: fit if CV evaluation satisfactory
- ★ **Asymptomatic sinus pauses < 2.5 sec – fit if exercise ECG, EchoCG and 24-hr ECG satisfactory**
- ★ **Symptomatic sino-atrial disease - unfit**



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## 5. Heart Block

- ★ **Mobitz type 2 AV block – full cardiological evaluation, fit if no distal conducting tissue disease**



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## 6. Complete right bundle branch block

- ★ First presentation - cardiological evaluation
- ★ Initial under 40 – fit by Authority
- ★ Initial over 40 - 12 months of stability
- ★ Revalidation – fit if under 40
- ★ Over 40 - OML



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## 7. Complete left bundle branch block

- ★ **Fit – by the Authority**
- ★ **Initial – 3 years of stability**
- ★ **Revalidation – 3 years OML**
- ★ **Over 40 - investigation of the coronary arteries**



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## 8. Ventricular pre-excitation

- ★ **Fit – by the Authority**
- ★ **Asymptomatic initial fit if EPS study, including adequate drug-induced autonomic stimulation reveals no inducible re-entry tachycardia and the existence of multiple pathways is excluded**
- ★ **Asymptomatic at revalidation - OML**



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## 9. Pacemaker

- ★ **Subendocardial– unfit**

- ★ **Authority - fit after 3 months if:**

- ➔ no other disqualifying condition
- ➔ a bipolar lead system
- ➔ the applicant is not pacemaker dependent
- ➔ regular follow-up including a pacemaker check
- ➔ OML





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## 10. QT Prolongation

- ★ Associated with symptoms – unfit
- ★ Asymptomatic - cardiological evaluation

## 11. Implantable Cardioverter Defibrillators

- ★ Automatic implantable defibrillating system - unfit



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AMC A to MED.B.020

## METABOLIC AND ENDOCRINE SYSTEMS

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### 1. Metabolic, nutritional or endocrine dysfunction

- ★ **Fit if asymptomatic**
- ★ **Clinically compensated and stable**
- ★ **Reviewed by specialist**

### 2. Obesity

- ★ **BMI  $\geq 35$  safe exercise of privileges**
- ★ **Satisfactory cardiovascular risk**



### 3. Addison's disease

- ✧ **Fit if cortisone is carried, available for use**
- ✧ **OML**

### 4. Gout

- ✧ **Fit if asymptomatic**
- ✧ **After cessation of treatment, or**
- ✧ **Stabilised on anti-hyperuricaemic therapy**



## 5. Thyroid dysfunction

- ★ **Hyperthyroidism or hypothyroidism – unfit**
- ★ **Fit if stable euthyroid state is attained**

## 6. Abnormal glucose metabolism

- ★ **Glycosuria and abnormal blood glucose - investigation**
- ★ **Fit if normal glucose tolerance, or**
- ★ **Impaired glucose tolerance without diabetic pathology is fully controlled by diet and regularly reviewed**



## 7. Diabetes mellitus

### ➤ Fit if:

- ★ good control of blood sugar
  - ★ no hypoglycaemic episodes
- The use of certain oral antidiabetic medications may be acceptable for a fit assessment with a multi-pilot limitation



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# AMC A to MED.B.065 VISUAL SYSTEM

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## 1. Eye examination

- ★ **At each aeromedical revalidation examination**
- ★ **If abnormal and doubtful - ophthalmologist**
- ★ **Specialist ophthalmological examinations are required – limitation on MC**



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## 2. Comprehensive eye examination

- ★ **At initial**
- ★ **By eye specialist**
- ★ **Doubtful or abnormal - ophthalmologist**
- ★ **History**
- ★ **Visual acuities; near, intermediate and distant vision (uncorrected and with best optical correction if needed)**
- ★ **Examination of the external eye, anatomy, media (slit lamp) and fundoscopy**



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# AMC A to MED.B.065 VISUAL SYSTEM

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## 2. Comprehensive eye examination

- ★ **Ocular motility**
- ★ **Binocular vision**
- ★ **Colour vision**
- ★ **Visual fields**
- ★ **Tonometry on clinical indication**
- ★ **Refraction. Hyperopic initial applicants under the age of 25 should undergo objective refraction in cycloplegia**





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## 3. Routine eye examination

- ★ May be performed by an AME
- ★ History
- ★ Visual acuities; near, intermediate and distant vision (uncorrected and with best optical correction if needed)
- ★ Examination of the external eye, anatomy, media and funduscopy
- ★ Further examination on clinical indication



# AMC A to MED.B.065

## VISUAL SYSTEM

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### 4. Refractive error

#### 4.1. At initial may be assessed as fit if:

- ★ **Hypermetropia not exceeding +5.0 dioptries**
- ★ **Myopia not exceeding -6.0 dioptries**
- ★ **Astigmatism not exceeding 2.0 dioptries**
- ★ **Anisometropia not exceeding 2.0 dioptries**  
**provided that optimal correction has been considered and no significant pathology is demonstrated.**



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## VISUAL SYSTEM

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### 4.2. At revalidation an applicant may be assessed as fit with:

- ★ **Hypermetropia not exceeding +5.0 dioptries**
- ★ **Myopia exceeding -6.0 dioptries**
- ★ **Astigmatism exceeding 2.0 dioptries**
- ★ **Anisometropia exceeding 2.0 dioptries (contact lenses should be worn if the anisometropia exceeds 3.0 dioptries provided that optimal correction has been considered and no significant pathology is demonstrated).**



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- 4.3. If the refractive error is +3.0 to +5.0 or -3.0 to -6.0 dioptres a review shall be undertaken 5 yearly by an eye specialist
- 4.4. 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 shall be undertaken 2 yearly by an eye specialist



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**In cases 4.3. and 4.4. above the applicant should supply the eye specialist's report to the AME. The report should be forwarded to the licensing authority as part of the medical examination report. All abnormal and doubtful cases should be referred to an ophthalmologist**



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## 5. Uncorrected visual acuity

- ★ **No limits apply**

## 6. Substandard vision

### 6.1. Reduced central vision in one eye

- ★ **Fit if the binocular visual field is normal**
- ★ **Underlying pathology is acceptable**
- ★ **Satisfactory medical flight test**
- ★ **OML**



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## VISUAL SYSTEM

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### 6. Substandard vision

#### 6.2. Acquired substandard vision in one eye

##### ★ **Fit with OML if:**

- the better eye achieves distant visual acuity of 6/6 (1.0), corrected or uncorrected
- the better eye achieves intermediate visual acuity of N14 and N5 for near
- 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 pilot is assessed as unfit
- there is no significant ocular pathology
- a medical flight test is satisfactory



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## 6. Substandard vision

6.3. 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 to the licensing authority

## 7. Keratoconus

- ✦ **Fit if the visual requirements are met with the use of corrective lenses**
- ✦ **Periodic review is undertaken by an ophthalmologist**





# AMC A to MED.B.065

## VISUAL SYSTEM

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### 9. Eye surgery

#### 9.1. Refractive surgery, fit if:

- ★ **Pre-operative refraction was no greater than +5 or -6 dioptries**
- ★ **Post-operative stability of refraction has been achieved (less than 0.75 dioptries variation diurnally)**
- ★ **Examination of the eye shows no postoperative complications**
- ★ **Glare sensitivity is within normal standards**



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## 9.1. Refractive surgery, fit if:

- ★ **Mesopic contrast sensitivity is not impaired**
- ★ **Review is undertaken by an eye specialist**

## 9.2. Cataract surgery

- ★ **Unfit**
- ★ **A fit assessment may be considered after 3 months**



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## 9.3 Retinal surgery

- ★ **Fit after 6 months (successful surgery)**
- ★ **Earlier - after retinal laser therapy**
- ★ **Follow-up**

## 9.4. Glaucoma surgery

- ★ **Fit after 6 months (successful surgery)**
- ★ **Follow-up**

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



**Thank you**

**Dr. Virgilijus Valentukevicius**

**[virgilijus.valentukevicius@easa.europa.eu](mailto:virgilijus.valentukevicius@easa.europa.eu)**