

## Appendix 4

### Medical requirements for Class 4 medical certificates

#### 4.1. Cardiovascular system

4.1.1. The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's license and rating privileges.

4.1.2. A standard 12-lead resting electrocardiogram (ECG) and report shall be completed on clinical indication, and: for a Class 4 medical certificate, at the examination for the first issue of a medical certificate, then on clinical indication and at all revalidation or renewal examinations thereafter; the purpose of routine electrocardiography is case finding.

4.1.3. Applicants with myocardial ischemia; Coronary by-pass surgery or Coronary angioplasty/Stenting shall be assessed as unfit: a fit assessment can be considered by Aero medical center or the Aeromedical Division (MD.) Personnel licensing department of The Civil Aviation Authority of Thailand. Recommendation on appendix 5 item 5.2.6, 5.2.7.

4.1.4. Applicants with disturbance of supraventricular rhythm, including intermittent or established sinoatrial dysfunction, atrial fibrillation and/or flutter and asymptomatic sinus pauses; shall be assessed as unfit. shall undergo satisfactory cardiological evaluation before a fit assessment. Recommendation on appendix 5 item 5.2.8

4.1.5. Whose blood pressure at examination consistently exceeds 160 mmHg systolic and/or 95 mmHg diastolic, with or without treatment; shall be assessed as unfit.

4.1.6. In aviation, most of the currently employed agents are permissible as on appendix 5 item 5.2.4.

4.1.7. Applicants who have undergone ablation therapy should be assessed as unfit evaluation before a fit assessment. Recommendation on appendix 5 item 5.2.8

4.1.8. Applicants for a Class 4 medical certificate with a history of: pacemaker implantation; shall undergo satisfactory cardiological and Aeromedical center or the Aeromedical Division (MD.) Personnel licensing department of The Civil Aviation Authority of Thailand evaluation before a fit assessment can be considered. Recommendation on appendix 5 item 5.2.8

4.1.9. Applicants with cardiac valvular abnormalities; shall be assessed as unfit;

4.1.10. Applicants with an established history or diagnosis of cardiovascular condition requiring systemic anticoagulant therapy shall undergo satisfactory cardiological and Aeromedical center or the Aeromedical Division (MD.) Personnel licensing department of The Civil Aviation Authority of Thailand evaluation before a fit assessment. Recommendation on appendix 5 item 5.2.11. 5.6.6.

4.1.11. Applicants with an established history or diagnosis of recurrent vasovagal syncope shall be assessed as unfit: shall undergo satisfactory cardiological and Aeromedical center or the Aeromedical Division (MD.) Personnel licensing department of The Civil Aviation Authority of Thailand evaluation before a fit assessment. Recommendation on appendix 5 item 5.2.14.

## **4.2. Respiratory system**

4.2.1. Applicants with significant impairment of pulmonary function shall be assessed as unfit.

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

4.2.3. All applicants with chronic obstructive airways disease [due to] Chronic Bronchitis and/or Emphysema require careful and individual evaluation and assessment. In general though, all applicants for initial medical certificates with an established history of COAD requiring continuous medication shall be assessed as unfit. Recommendation on appendix 5 item 5.3.2.

4.2.4. Applicants with a history or established diagnosis of asthma requiring medication shall undergo respiratory evaluation with a satisfactory result before a fit assessment can be considered. Recommendation on appendix 5 item 5.3.3.

4.2.5. Applicants with a history or established diagnosis of pneumothorax; shall undergo respiratory evaluation with a satisfactory result before a fit assessment can be considered. Recommendation on appendix 5 item 5.3.6.

4.2.6. Applicants with active pulmonary tuberculosis shall be assessed as unfit. Recommendation on appendix 5 item 5.3.5.

4.2.7. Applicants with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit. Recommendation on appendix 5 item 5.3.5.

4.2.8. Applicants with a history or established diagnosis of major thoracic surgery; 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 license(s) and shall undergo respiratory evaluation with a satisfactory result before a fit assessment can be considered. Recommendation on appendix 5 item 5.3.7.

### **4.3. Digestive system**

4.3.1. Applicants shall not possess any functional or structural disease of the gastrointestinal tract or its adnexa which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

4.3.2. Applicants with disorders of the gastro-intestinal system including: recurrent dyspeptic disorder requiring medication; pancreatitis; shall be assessed as unfit. A fit assessment may be considered after successful treatment. Recommendation on appendix 5 item 5.4.1.

4.3.3. Applicants with disorders of the gastro-intestinal system including: Asymptomatic gallstones; 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. Recommendation on appendix 5 item 5.4.2.

4.3.4. Small multiple asymptomatic stones with functional gall-bladder may, however, cause colic and potential incapacitation and are disqualifying until adequately treated. Recommendation on appendix 5 item 5.4.2.

4.3.5. Applicants with disorders of the gastro-intestinal system including: an established diagnosis or history of chronic inflammatory bowel disease; shall be assessed as unfit.

4.3.6. Applicants with disorders of the gastro-intestinal system including: an established diagnosis or history of chronic inflammatory bowel disease; A fit assessment may be considered after successful treatment or full recovery after surgery and subject to satisfactory gastroenterological evaluation. Recommendation on appendix 5 item 5.4.3.

4.3.7. Applicants shall be free from hernia that might give rise to incapacitating symptoms.

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

4.3.9. 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 license(s). Recommendation on appendix 5 item 5.4.4.

4.3.10. Infectious hepatitis is disqualifying. A fit assessment may be considered after full recovery. Recommendation on appendix 5 item 5.4.6.

#### **4.4. Metabolic, Nutritional and Endocrine disease**

4.4.1. 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 license(s).

4.4.2. Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit subject to demonstrated stability of the condition and satisfactory aeromedical evaluation.

4.4.3. Applicants with diabetes mellitus not requiring insulin shall be assessed as unfit unless it can be demonstrated that blood sugar control has been achieved. Recommendation on appendix 5 item 5.5.2. and 5.5.3

4.4.4. Applicants with diabetes mellitus requiring insulin shall be assessed as unfit.

4.4.5. Applicants with a Body Mass Index  $\geq 35$  may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the applicable license(s) and a satisfactory cardiovascular risk review has been undertaken. Recommendation on appendix 5 item 5.10.1

4.4.6. Addison's disease is disqualifying. Recommendation on appendix 5 item 5.5.4

4.4.7. Applicants with hyperthyroidism should be assessed as unfit. Recommendation on appendix 5 item 5.5.5

4.4.8. Applicants with hypothyroidism should be assessed as unfit. Recommendation on appendix 5 item 5.5.6

#### **4.5. Hematology**

4.5.1. Applicants shall not possess any hematological disease which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

4.5.2. Applicants require a hematocrit test at each examination. Hematocrit below 32% requires an unfit assessment and further tests as clinically indicated. Recommendation on appendix 5 item 5.6.1.

4.5.3. Sickle cell trait or other hemoglobinopathy traits are usually compatible with a fit assessment. Recommendation on appendix 5 item 5.6.1.

4.5.4. Applicants with significant lymphatic enlargement; should be assessed as unfit Recommendation on appendix 5 item 5.6.2.

4.5.5. Applicants with acute leukemia should be assessed as unfit Applicants with chronic leukemia should be assessed as unfit. After a period of demonstrated stability a fit assessment may be considered. Recommendation on appendix 5 item 5.6.3.

4.5.6. Applicants with splenomegaly should be assessed as unfit and require investigation. Recommendation on appendix 5 item 5.6.4.

4.5.7. Applicants with polycythemia should be assessed as unfit and require investigation. Recommendation on appendix 5 item 5.6.5.

4.5.8. Applicants with a coagulation disorder should be assessed as unfit. The use of oral anticoagulant medicines are incompatible with certification. Recommendation on appendix 5 item 5.6.6.

4.5.9. Applicants with a thrombocytopenia under 75,000/mm<sup>3</sup> (75×10<sup>9</sup>/L) are unfit for certification. Recommendation on appendix 5 item 5.6.7.

#### **4.6. Urinary system**

4.6.1. 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 license(s).

4.6.2. Applicants with renal or Genito-urinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their license and rating privileges. Urinalysis shall form part of every aero-medical examination. The urine shall contain no abnormal element considered to be of pathological significance. Recommendation on appendix 5 item 5.7.3.-5.7.10

4.6.3. Applicants with one or more urinary calculi, or a history of renal colic; may be assessed as fit subject to satisfactory renal/urological evaluation Recommendation on

appendix 5 item 5.7.2

4.6.4. Applicants with Hematuria of urological origin shall be assessed as unfit, Recommendation on appendix 5 item 5.7.3

4.6.5. Incapacitation secondary to incontinence will warrant suspension from flight until definitive diagnosis and treatment are performed. Recommendation on appendix 5 item 5.7.4

4.6.6. Applicants with Scrotal problems shall be assessed as unfit, Recommendation on chapter 5 item 5.7.5

4.6.7. Applicants with Urological Infection shall be assessed as unfit, Recommendation on appendix 5 item 5.7.6

4.6.8. Applicants with Congenital and Renal Cystic Diseases shall be assessed as unfit, Recommendation on appendix 5 item 5.7.7

4.6.9. Applicants with Medullary sponge kidney shall be assessed as unfit, Recommendation on appendix 5 item 5.7.8

4.6.10. Applicants with Adult polycystic kidney disease shall be assessed as unfit, Recommendation on appendix 5 item 5.7.9

4.6.11. Temporary aeromedical disqualification may be necessary in the patient with symptomatic obstruction secondary to benign prostatic hyperplasia (BPH) Recommendation on appendix 5 item 5.7.10

4.6.12. 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 for a minimum period of 3 months or until such time as the effects of the operations are no longer likely to interfere with the safe exercise of the privileges of the applicable license(s) Recommendation on appendix 5 item 5.7.11

4.6.13. Applicants shall undergo satisfactory oncological evaluation before a fitness assessment can be made. Recommendation on appendix 5 item 5.7.14

#### **4.7. Sexually transmitted disease and other infections**

4.7.1. 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 license held.

4.7.2. Applicants with infectious diseases such as.

4.7.2.1. HIV positive. Recommendation on appendix 5 item 5.8.2.

4.7.2.2. Immune system impairment.

4.7.2.3. Infectious hepatitis. Recommendation on appendix 5 item 5.8.4.

4.7.2.4. Syphilis. Recommendation on appendix 5 item 5.8.3.

May be assessed as fit subject to satisfactory aero-medical evaluation

#### **4.8. Gynecology and obstetrics**

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

4.8.2. An applicant with a history of severe menstrual disturbances unamenable to treatment should be assessed as unfit. Recommendation on appendix 5 item 5.9.2.-5.9.3.

4.8.3. For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with Recommendation on appendix 5 item 5.9.1, A pregnant license holder may be assessed as fit with a multi-pilot limitation during the first 26 weeks of gestation. Close medical supervision must be established for the part of the pregnancy where the pilot continues flying, and all abnormalities should be reported to the medical examiner. Provided the puerperium is uncomplicated and full recovery takes place, she should be able to resume aviation duties two to six weeks after confinement.

4.8.4. An applicant who has undergone a major gynecological operation should be assessed as unfit for a period of 2-3 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 license(s)

Recommendation on appendix 5 item 5.9.4

#### **4.9. Musculoskeletal requirements**

4.9.1. 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 license(s).

4.9.2. An applicant shall have sufficient sitting height, arm and leg length and muscular strength for the safe exercise of the privileges of the applicable license(s). Recommendation on appendix 5 item 5.10.1

4.9.3. An applicant shall have satisfactory functional use of the musculoskeletal system to enable the safe exercise of the privileges of the applicable license(s). Fitness of the applicants shall be assessed in consultation with the Aeromedical center or the Aeromedical Division (MD.) Personnel licensing department of The Civil Aviation Authority of Thailand.

Recommendation on appendix 5 item 5.10.2

4.9.4. Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

Recommendation on appendix 5 item 5.10.3-5.10.7

#### **4.10. Aviation Psychiatry.**

4.10.1. 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 license(s).

4.10.2. The applicant shall have no established medical history or clinical diagnosis of: an organic mental disorder; Recommendation on appendix 5 item 5.11.2

4.10.3. The applicant shall have no established medical history or clinical diagnosis of: Dementias; Recommendation on appendix 5 item 5.11.3

4.10.4. The applicant shall have no established medical history or clinical diagnosis of: Mental and behavioral disorder due to psychoactive substances use; this includes dependence syndrome induced by alcohol or other psychoactive substances; Recommendation on appendix 5 item 5.11.11

4.10.5. The applicant shall have no established medical history or clinical diagnosis of: Schizophrenia or a schizotypal or delusional disorder; Recommendation on appendix 5 item 5.11.4

4.10.6. The applicant shall have no established medical history or clinical diagnosis of: A mood (affective) disorder; Recommendation on appendix 5 item 5.11.5

4.10.7. The applicant shall have no established medical history or clinical diagnosis of: a neurotic, stress-related or somatoform disorder; Recommendation on appendix 5 item 5.11.6



4.10.8. The applicant shall have no established medical history or clinical diagnosis of: a behavioral syndrome associated with physiological disturbances or physical factors;  
Recommendation on appendix 5 item 5.11.7

4.10.9. The applicant shall have no established medical history or clinical diagnosis of: a disorder of adult personality or behavior, particularly if manifested by repeated overt acts;  
Recommendation on appendix 5 item 5.11.7-5.11.8

4.10.10. The applicant shall have no established medical history or clinical diagnosis of:  
Mental retardation;

4.10.11. The applicant shall have no established medical history or clinical diagnosis of: a disorder of psychological development;

4.10.12. The applicant shall have no established medical history or clinical diagnosis of: a behavioral or emotional disorder, with onset in childhood or adolescence

4.10.13. The applicant shall have no established medical history or clinical diagnosis of:  
(A mental disorder not otherwise specified;)

4.10.14. The applicant shall have no established medical history or clinical diagnosis of:  
sleep disorders. Recommendation on appendix 5 item 5.11.9

**Recommendation.** An applicant with depression, being treated with antidepressant medication, should be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's license and rating privileges.

**Note;** Mental and behavioral disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition — Classification of Mental and Behavioral Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to medical assessment.

#### **4.11. Neurological disorders.**

4.11.1. 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 license(s).

4.11.2. Applicants with an established history or clinical diagnosis of:

Recommendation on appendix 5 item 5.12.

4.11.2.1. Progressive or non-progressive disease of the nervous system;

Recommendation on appendix 5 item 5.12.1-5.12.4

4.11.2.2. Epilepsy; recurring episodes of disturbance of consciousness of uncertain cause; Recommendation on appendix 5 item 5.12.5-5.12.8

4.11.2.3. Conditions with a high propensity for cerebral dysfunction

Recommendation on appendix 5 item 5.12.9, 5.12.13, 5.12.14, 5.12.15

4.11.2.4. Recurring episodes of disturbance of consciousness of uncertain cause;

4.11.2.5. Head injury; Recommendation on appendix 5 item 5.12.10

4.11.2.6. Spinal or peripheral nerve injury; Recommendation on appendix 5 item 5.12.11

4.11.2.7. Intracranial neoplasms are not rare and will be encountered in the license holder population. Recommendation on appendix 5 item 5.12.12

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

#### **4.12. Ophthalmologic requirements**

4.12.1. 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 license(s). Recommendation on appendix 5 item 5.13.1

4.12.2. A comprehensive eye examination shall form part of the initial examination;

4.12.3. A routine eye examination shall form part of all revalidation and renewal examinations. Recommendation on appendix 5 item 5.13.2, 5.14

#### **4.13. Visual requirements**

4.13.1. Distant visual acuity, with or without correction, shall be: 6/12 (20/40) or better in each eye separately and visual acuity with both eyes shall be 6/9 (20/30) or better; No limits apply to uncorrected visual acuity.

4.13.2. An eye which has no refractive error is said to be emmetropic. In such an eye, parallel rays of light from a distant object are focused on the retina without the need for any accommodation so that objects in the distance are seen clearly. A comprehensive

eye examination shall form part of the initial examination and be undertaken periodically

4.13.2.1. Comprehensive eye examination shall form part of the initial examination and be undertaken periodically of applicant with Presbyopia.

4.13.2.2. An applicant shall be able to read an N5 chart (or equivalent) at 30-50 cm and an N14 chart (or equivalent) at 100 cm, with correction, if prescribed.

4.13.3. Applicants shall be required to have normal fields of vision and normal binocular function.

4.13.4. Applicants with diplopia shall be assessed as unfit.

4.13.5. Applicants shall be required to have normal fields of vision.

4.13.6. The correction shall provide optimal visual function, be well-tolerated and suitable for aviation purposes;

4.13.7. The correction shall provide optimal visual function, be well-tolerated and suitable for aviation purposes;

4.13.8. A spare set of similarly correcting spectacles shall be readily available for immediate use whilst exercising the privileges of the applicable license(s);

#### **4.14. Color Perception Requirements**

4.14.1. Applicants shall pass the Ishihara test for the initial issue of a medical certificate; or Nagel's anomaloscope

4.14.2. Applicants shall have normal perception of colors or be color safe.

4.14.3. Applicants who fail to pass in the Ishihara test shall undergo further color perception testing to establish whether they are color safe. Recommendation on appendix 5 item 5.15

4.14.4. Applicants who fail further color perception testing shall be assessed as unfit. Recommendation on appendix 5 item 5.15

#### **4.15. Otorhinolaryngology.**

4.15.1. 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 license(s).

4.15.2. A routine Ear-Nose-Throat examination shall form part of the initial examination and revalidation and renewal.

4.15.3. Applicants with:

4.15.3.1. An active pathological process, acute or chronic, of the internal or middle ear;

4.15.3.2. Unhealed perforation or dysfunction of the tympanic membrane(s);  
Recommendation on appendix 5 item 5.16.3

4.15.3.3. Disturbance of vestibular function; Recommendation on appendix 5 item 5.16.4

4.15.3.4. Significant restriction of the nasal passages; sinus dysfunction;

4.15.3.5. Significant malformation or significant, acute or chronic infection of the oral cavity or upper respiratory tract;

4.15.3.6. Significant disorder of speech or voice;

4.15.3.7. Receive any medical, surgical or other treatment that is likely to interfere with flight safety. Recommendation on appendix 5 item 5.16.5

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

#### **4.16. Hearing requirements**

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

4.16.2. An instrument rating is to be added to the license held, hearing shall be tested with pure tone audiometry at the clinical indication.

4.16.3. 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. Hearing loss of more than 5 dB at two frequencies should be unfit. Recommendation on appendix 5 item 5.17.2.2.

4.16.4. 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 Aeromedical center or the Aeromedical Division (MD.) Personnel licensing department of The Civil Aviation Authority of Thailand.

4.16.5. The use of personal hearing aids is usually not accepted during flight performance of professional flight crews. Recommendation on appendix 5 item 5.17.4

**4.17. Aviation Psychology.**

Applicants shall have no established psychological deficiencies, which are likely to interfere with the safe exercise of the privileges of the applicable license(s). A psychological evaluation may be required as part of, or complementary to, a specialist psychiatric or neurological examination. A psychological evaluation shall form as clinically indicated.

Recommendation on appendix 5 item 5.18

**4.18. Dermatology.**

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

4.18.2. Applicants with an established history or clinical diagnosis of:

4.18.2.1. Eczema exogenous and endogenous.

4.18.2.2. Severe psoriasis.

4.18.2.3. Bacterial infections.

4.18.2.4. Drug induced eruptions.

4.18.2.5. Bullous eruption.

4.18.2.6. Malignant condition of the skin.

4.18.2.7. Urticaria.

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

**4.19. Oncology.**

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

4.19.2. After treatment for malignant disease, applicants shall undergo satisfactory oncological evaluation before a fit assessment can be made. Recommendation on appendix 5 item 5.20

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