

Annex to ED Decision 2020/009/R

'Acceptable Means of Compliance (AMC) and Guidance Material (GM) to Authority, Organisation and Operations Requirements for Aerodromes — Issue 1, Amendment 3'

The Annex to ED Decision 2014/012/R is amended as follows:

The text of the amendment is arranged to show deleted text, new or amended text as shown below:

- deleted text is ~~struck through~~;
- new or amended text is highlighted in blue;
- an ellipsis '(...)' indicates that the rest of the text is unchanged.

AMC1 ADR.OPS.B.010(b);(c) Rescue and firefighting services

TRAINING PROGRAMME OF RFFS PERSONNEL – GENERAL

The provisions of AMC1 ADR.OR.D.017(a);(b) apply also for the training programme of RFFS personnel.

In addition, the aerodrome operator should ensure that:

- (a) rescue and ~~fire-fighting~~ firefighting personnel actively participate in live fire drills commensurate with the types of aircraft, and type of rescue and firefighting equipment in use at the aerodrome, including pressure-fed jet fuel fire drills or any other type of fuel, provided that they apply the same extinguishing techniques as for jet fuel; and

[...]

GM1 ADR.OPS.B.010(a)(4) Rescue and firefighting services

MEDICAL ASSESSMENT

1. General

Rescue and firefighting personnel, when responding to an accident, need to be capable of withstanding physically aggressive conditions whilst performing efficiently. Additionally, managing life-threatening situations which put at risk aircraft occupants' safety requires also mental fitness. For this reason, decision-making and stress management should not be impaired.

The key fitness components for rescue and firefighting personnel are aerobic fitness, anaerobic fitness, flexibility and medical fitness. Optimum physical and medical fitness would mean that a firefighter is able to carry out rescue and firefighting activities safely, successfully and without unjustified fatigue.

In order to understand better the key fitness components, the following aspects may have to be considered:

Aerobic fitness refers to the ability to continue to exercise for prolonged periods of time at low to moderate or high intensity. This depends upon the capacity of the body's heart, lungs and blood to get the oxygen to the muscles (VO₂) providing the sustained energy to maintain prolonged exercise.

Anaerobic fitness works differently to aerobic fitness. It is an activity that requires high levels of strength and is done for only a very short period of time at a high level of intensity. Anaerobic fitness may be defined as higher levels of muscular strength, speed and power.

Flexibility refers to the ability to move the limbs and joints into specific positions at the extreme of their normal range of movement. Flexibility is important as it will allow the body to work in cramped positions without unduly stressing the muscles, tendons and ligaments and may reduce the risk of injury.

2. Definitions

For the purpose of this guidance, the following definitions can be considered:

'Assessment' refers to the conclusion on the medical fitness of a person based on the evaluation of the applicant's medical history, medical examinations and medical tests which are performed.

'Medical staff' refers to general medical practitioners (GMPs) and occupational health medical practitioners (OHMPs) who have appropriate qualifications and/or experience in the field of occupational medicine practice or aeromedical examiners (AMEs) or aeromedical centres (AeMCs).

'Significant' refers to a degree of a medical condition, the effect of which would prevent the safe performance of duties related to rescue and firefighting.

3. Medical confidentiality

All persons involved in medical examinations and assessments ensure that medical confidentiality is respected at all times. For this reason, all reports and records are to be securely held with accessibility restricted only to authorised personnel.

4. Decrease in medical fitness

Rescue and firefighting personnel need to exercise a duty of care and not to perform their duties when they are aware of any decrease in their medical fitness, to the extent that this condition might render them unable to perform their duties. Furthermore, without undue delay, medical advice is needed when they:

- (a) have undergone a surgical operation or invasive procedure;
- (b) have commenced the regular use of any medication;
- (c) have suffered any significant personal injury;
- (d) have been suffering from any significant illness;
- (e) are pregnant; and
- (f) have been admitted to hospital or medical clinic.

In these cases, the medical fitness of the person is assessed by medical staff in order to decide whether the person is fit to resume duties. Additionally, following recovery from significant illness or injury, it

may be necessary, after recommendation of the medical staff, to undergo any relevant physical fitness tests prior to a return to operational duty.

5. Medical staff

- (a) Medical examinations and/or assessments are conducted by medical staff who have knowledge of the rescue and firefighting personnel's workloads and risk factors.
- (b) When conducting medical examinations and/or assessments, the medical staff member:
 - (1) ensures that communication with the person can be established without language barriers; and
 - (2) makes the person aware of the consequences of providing incomplete, inaccurate or false statements on their medical history.
- (c) After completion of the medical examinations and/or assessments, the medical staff member:
 - (1) advises the person whether they have been assessed as fit or unfit;
 - (2) informs the person of any limitation(s) to operational duty;
 - (3) completes a medical report;
 - (4) informs the person of their responsibilities in the case of decrease in medical fitness; and
 - (5) if the person has been assessed as unfit, informs them of their right of a secondary review.

6. Medical assessment programme

A medical assessment programme is a tool to promote and facilitate that rescue and firefighting personnel are free of any physical or mental illness, which might lead to incapacitation or inability to perform their assigned duties and responsibilities.

The programme includes an initial assessment prior to employment and re-examinations at regular intervals. The frequency of the re-examinations may take into account the age of the person, the medical history, etc.

7. Medical assessment

- (a) The objective of a medical assessment is to assess the physical and mental ability of the rescue and firefighting personnel to:
 - (1) undergo the training which is necessary to acquire and maintain competence in the execution of their tasks related to rescue and firefighting, such as working in a high-temperature environment, using protective breathing equipment in a simulated smoke-filled environment, assisting trapped or injured passengers to escape the aircraft, etc.; and
 - (2) perform their duties in psychologically demanding circumstances.
- (b) Fit rescue and firefighting personnel will be free from any:
 - (1) abnormality, congenital or acquired;
 - (2) active, latent, acute or chronic disease or disability;

- (3) wound, injury or sequel from an operation;
- (4) effect or side effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken, which entails a degree of functional incapacity that is likely to interfere with the performance of their duties or could render them likely to become suddenly unable to perform their duties.

(c) The initial medical assessment includes at least:

- (1) an assessment of the medical history; and
- (2) a clinical examination of the following:
 - (i) cardiovascular system;
 - (ii) respiratory system;
 - (iii) musculoskeletal system;
 - (iv) otorhinolaryngology (ENT); and
 - (v) visual system.

(d) Each subsequent medical assessment includes:

- (1) an assessment of the medical history; and
- (2) a clinical examination (if deemed necessary) in accordance with best medical practices.

Nevertheless, if during any medical assessment there is a doubt or if clinically indicated, additional medical examinations, tests or investigations may also be conducted if considered necessary by the medical staff.

CLINICAL EXAMINATION AND INVESTIGATION

Clinical examination may include the following:

(a) Cardiovascular system

- (1) blood pressure measurement; and
- (2) a standard 12-lead resting ECG and report. An extended cardiovascular assessment (including an exercise ECG) is required when clinically indicated.

(b) Respiratory system

- (1) pulmonary function tests; and
- (2) chest X-ray on clinical indication.

(c) Musculoskeletal system

(d) ENT

- (1) a routine inspection of ears, nose and throat;
- (2) a conversational hearing test during which the person is able to understand correctly conversational speech when tested with each ear at a distance of 2 metres from and with their back turned towards the medical staff; and

(3) on clinical indication, pure tone audiometry measured at 500, 1 000, 2 000, 3 000, and 4 000 Hz.

(e) Visual system using standard techniques

- (1) distance vision;
- (2) near vision;
- (3) visual fields, on clinical indication;
- (4) colour vision (initial only or on clinical indication);
- (5) eye movements; and
- (6) ocular inspection.

(f) Urine tests for blood, protein and sugar

(g) Blood tests

Persons will undergo a blood test, taking into account the medical history and following the physical examination of:

- (1) full blood count;
- (2) liver function;
- (3) kidney function;
- (4) blood sugar; and
- (5) serum lipids, including cholesterol.

8. Medical report

After the completion of each medical assessment, a written medical report will be provided by the medical staff to the person concerned, as well as to the organisation employing them.

The report indicates the date of the medical assessment, whether the person has been assessed as fit or unfit, the date of the next medical assessment and, if applicable, any limitation(s). All other elements are subject to medical confidentiality; therefore, they are not included in the report.

9. Limitations

If any person does not fully satisfy the established medical criteria, they may be allowed to exercise their tasks with some limitations. The limitations will be detailed by the medical staff and listed in the medical report.

Removal of the limitations is normally taking place following a re-assessment by the medical staff.

EXAMPLES OF LIMITATIONS

Depending on the case, operational limitations and/or use of aids may be imposed, as follows (list not exhaustive and based on the fit assessment and operational requirements):

- (a) Wearing of corrective lenses;
- (b) Wearing of hearing aids;

- (c) Reduction of the interval between consecutive medical examinations or assessments. In this case, the persons concerned will present themselves for re-examination when advised and follow any medical recommendations;
- (d) Operational restrictions such as:
 - (1) use of breathing apparatus;
 - (2) work in confined spaces;
 - (3) ladder climbing;
 - (4) working at heights;
 - (5) driving;
 - (6) operating or carrying heavy equipment; and
 - (7) descending the pole; and
- (e) Working only in specific periods of the day (e.g. day shifts only).

GM2 ADR.OPS.B.010(a)(4) Rescue and firefighting services

MEDICAL CRITERIA FOR RFSS PERSONNEL

1. CARDIOVASCULAR SYSTEM

(a) General

- (1) Rescue and firefighting personnel with any of the following conditions are assessed as unfit:
 - (i) aneurysm of the thoracic or supra-renal abdominal aorta, before or after a surgery;
 - (ii) significant functional abnormality of any of the heart valves;
 - (iii) heart or heart/lung transplantation;
 - (iv) symptomatic sinoatrial disease;
 - (v) complete atrioventricular block;
 - (vi) a sub-endocardial pacemaker;
 - (vii) symptomatic channelopathies including QT prolongation and Brugada syndrome;
 - (viii) an automatic implantable defibrillating system;
 - (ix) a ventricular anti-tachycardia pacemaker; and
 - (x) pulmonary hypertension.
- (2) Rescue and firefighting personnel with a suspected or established diagnosis of any of the following conditions are assessed as unfit. Following satisfactory treatment and specialist review, a fit assessment can be considered.

- (i) Coronary arterial disease before or after intervention;
- (ii) Peripheral arterial disease before or after a surgery;
- (iii) Aneurysm of the infra-renal abdominal aorta, before or after a surgery;
- (iv) Functionally insignificant cardiac valvular abnormalities;
- (v) After a cardiac valve surgery;
- (vi) Significant disorder of cardiac rhythm, including pacemakers and ablation therapy;
- (vii) Abnormality of the pericardium, myocardium or endocardium;
- (viii) Congenital abnormality of the heart, before or after a corrective surgery;
- (ix) Recurrent vasovagal syncope;
- (x) Arterial or venous thrombosis;
- (xi) Pulmonary embolism; and
- (xii) Cardiovascular condition that requires systemic anticoagulant therapy.

(b) Peripheral arterial disease

Rescue and firefighting personnel with peripheral arterial disease, before or after a surgery, undergo a satisfactory cardiological evaluation including an exercise ECG. 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 that:

- (1) a Doppler echocardiography of the affected area 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.

(c) Aortic aneurysm

Rescue and firefighting personnel:

- (1) with an aneurysm of the infra-renal abdominal aorta are assessed as unfit;
- (2) may be assessed as fit after a surgery for an infra-renal aortic aneurysm without complications and subject to being free of disease of the carotid and coronary circulation.

(d) Cardiac valvular abnormalities

Rescue and firefighting personnel:

- (1) with previously unrecognised cardiac murmurs will undergo a cardiological evaluation. If considered significant, further investigation may be required subject to the recommendation of the cardiologist;
- (2) with minor cardiac valvular abnormalities may be assessed as fit. Regular cardiological follow-up, including at least a 2D Doppler echocardiography, as determined by the cardiologist is required;
- (3) with significant abnormality of any of the heart valves are assessed as unfit.

- (4) with bicuspid aortic valve may be assessed as fit if no other cardiac or aortic abnormality is demonstrated and if their effort capacity is not adversely affected. Regular cardiological follow-up, including a 2D Doppler echocardiography, is required;
- (5) with mild aortic stenosis may be assessed as fit if their effort capacity is not adversely affected. Annual cardiological follow-up is required which includes a 2D Doppler echocardiography;
- (6) with aortic regurgitation may be assessed as fit only if regurgitation is minor and there is no evidence of volume overload. There will be no demonstrable abnormality of the ascending aorta on a 2D Doppler echocardiography. Cardiological follow-up including a 2D Doppler echocardiography is required;
- (7) with rheumatic mitral stenosis may only be assessed as fit in favourable cases after a cardiological evaluation including a 2D Doppler echocardiography;
- (8) with uncomplicated minor mitral valve regurgitation may be assessed as fit if their effort capacity is not adversely affected. Regular cardiological follow-up including a 2D Doppler echocardiography is required;
- (9) with mitral valve prolapse and mild mitral regurgitation may be assessed as fit if their effort capacity is not adversely affected;
- (10) with evidence of volume overloading of the left ventricle demonstrated by increased left ventricular end-diastolic diameter are assessed as unfit;
- (11) with cardiac valve replacement/repair are assessed as unfit. After a satisfactory cardiological evaluation, a fit assessment may be considered; and
- (12) after a valvular surgery without any symptom may be assessed as fit after 6 months subject to:
 - (i) normal valvular and ventricular function as judged by a 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 being required;
 - (v) annual cardiological follow-up to include an exercise ECG and a 2D Doppler echocardiography. Longer periods may be acceptable once a stable condition has been confirmed by cardiological evaluations; and
 - (i) with implanted mechanical valves are assessed as unfit. Persons with implanted biological valves may be assessed as fit subject to documented exemplary compliance with their anti-platelet therapy. Age factors are part of the risk assessment.

(e) Thromboembolic disorders

Rescue and firefighting personnel with arterial or venous thrombosis or pulmonary embolism are assessed as unfit during anticoagulation. Rescue and firefighting personnel with pulmonary

embolism will also be evaluated by a cardiologist. Following cessation of anticoagulant therapy, for any indication, they need to undergo a re-assessment before returning to duty.

(f) Other cardiac disorders

Rescue and firefighting personnel:

- (1) with an abnormality of the pericardium, myocardium or endocardium are assessed as unfit. A fit assessment may be considered following a complete resolution and a satisfactory cardiological evaluation which may include a 2D Doppler echocardiography, an exercise ECG, a 24-hour ambulatory ECG, and/or a myocardial perfusion scan or an equivalent test. Coronary angiography or an equivalent test may be indicated. Regular cardiological follow-up may be required; and
- (2) with a congenital abnormality of the heart, including those who have undergone surgical correction, are assessed as unfit. Rescue and firefighting personnel with minor abnormalities that are functionally relevant and do not adversely affect their effort capacity may be assessed as fit following a cardiological assessment. No cardioactive medication is acceptable. Investigations may include a 2D Doppler echocardiography, an exercise ECG and a 24-hour ambulatory ECG. Regular cardiological follow-up may be required.

(g) Syncope

- (1) Rescue and firefighting personnel with a history of recurrent episodes of syncope are assessed as unfit. A fit assessment may be considered after a sufficient period of time without recurrence provided that a cardiological evaluation is satisfactory.
- (2) A cardiological evaluation following a single episode of syncope includes at least:
 - (i) a satisfactory symptom-limited exercise ECG. If the exercise ECG is abnormal, a myocardial perfusion scan or an equivalent test is 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; and
 - (iv) a tilt test carried out to a standard protocol showing no evidence of vasomotor instability.
- (3) Neurological review may be required.

(h) Blood pressure

- (1) Blood pressure will be within normal limits.
- (2) Rescue and firefighting personnel:
 - (i) with symptomatic hypotension; or
 - (ii) whose blood pressure at examination consistently exceeds 140 mmHg systolic and/or 90 mmHg diastolic, with or without treatment; or

(iii) who have initiated a medication for the control of blood pressure, will require a period of suspension from the duties in order to assess the severity of the condition, impose or change the treatment and/or to establish the absence of significant side effects.

(3) The investigation of possible hypertension and confirmation of adequate control on medication includes a 24-hour blood pressure monitoring.

(4) Anti-hypertensive 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; and
- (v) certain (generally hydrophilic) beta-blocking agents.

(5) Following initiation of medication for the control of blood pressure, rescue and firefighting personnel are re-assessed to verify that the treatment is compatible with the safe exercise of their duties.

(i) Coronary artery disease

(1) Rescue and firefighting personnel with chest pain will undergo a full investigation before a fit assessment may be considered. Rescue and firefighting personnel with angina pectoris are assessed as unfit, whether or not it is abolished by medication.

(2) Rescue and firefighting personnel with suspected asymptomatic coronary artery disease undergo a cardiological evaluation including an 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 (PTCI/stent and CABG), rescue and firefighting personnel without symptoms need to have reduced any vascular risk factors to an appropriate level. Medication, when used to control cardiac symptoms, is not acceptable. All rescue and firefighting personnel will be on acceptable secondary prevention treatment.

(i) A coronary angiogram or equivalent 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 is available.

(A) There is 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 are not acceptable.

(B) The whole coronary vascular tree is assessed as satisfactory by a cardiologist, and particular attention is 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 is not acceptable.
- (ii) At least 6 months from the ischaemic myocardial event, including revascularisation, the following investigations need to be completed:
 - (A) an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm or conduction disturbance;
 - (B) an echocardiogram or an 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 shows no evidence of reversible myocardial ischaemia. If there is any doubt about myocardial perfusion, in other cases (infarction or bypass grafting), a perfusion scan is also required; and
 - (D) further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.
- (iii) Follow-up is conducted annually (or more frequently, if necessary) to ensure that there is no deterioration of the cardiovascular status. It includes a cardiological evaluation, an exercise ECG and a cardiovascular risk assessment. Additional investigations may be required.
- (iv) After coronary artery vein bypass grafting, a myocardial perfusion scan or an equivalent test is performed on clinical indication, and in all cases within 5 years from the procedure.
- (v) In all cases, coronary angiography, or an equivalent test, is considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.
- (vi) Rescue and firefighting personnel may be assessed as fit to undergo the physical fitness tests after successful completion of the 6-month or later review.
- (j) Rhythm and conduction disturbances
 - (1) Rescue and firefighting personnel with any significant rhythm or conduction disturbance may be assessed as fit after a cardiological evaluation and with appropriate follow-up. Such an evaluation includes:
 - (i) an exercise ECG to show no significant abnormality of rhythm or conduction, and no evidence of myocardial ischaemia. Withdrawal of cardioactive medication prior to the test is required;
 - (ii) a 24-hour ambulatory ECG to demonstrate no significant rhythm or conduction disturbance; and
 - (iii) a 2D Doppler echocardiogram to 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 (EPS);
- (vi) myocardial perfusion imaging or equivalent test;
- (vii) cardiac magnetic resonance imaging (MRI) or equivalent test; and
- (viii) coronary angiogram or equivalent test.

- (2) Rescue and firefighting personnel with supraventricular or ventricular ectopic complexes on a resting ECG may require no further evaluation, provided that the frequency can be shown to be no greater than one per minute; for example, on an extended ECG strip.

Rescue and firefighting personnel with asymptomatic isolated uniform ventricular ectopic complexes may be assessed as fit but frequent or complex forms require a full cardiological evaluation.

(3) Ablation

- (i) Rescue and firefighting personnel who have undergone ablation therapy are assessed as unfit for a minimum period of 2 months.
- (ii) A fit assessment may be considered following successful catheter ablation provided that an EPS demonstrates satisfactory control has been achieved.
- (iii) Where EPS is not performed, longer periods of unfitness and cardiological follow-up needs to be considered.
- (iv) Follow-up includes a cardiological assessment.

(4) Supraventricular arrhythmias

Rescue and firefighting personnel with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, are assessed as unfit. A fit assessment may be considered if a cardiological evaluation, including the prospective risk of stroke, is satisfactory. Anticoagulation therapy is disqualifying.

- (i) For pre-employment assessments, for rescue and firefighting personnel with atrial fibrillation/flutter, a fit assessment is limited to those with a single episode of arrhythmia which is considered to be unlikely to recur.
- (ii) Rescue and firefighting personnel with asymptomatic sinus pauses up to 2.5 seconds on a resting ECG may be assessed as fit following a satisfactory cardiological evaluation. The cardiological evaluation includes at least the following: an exercise ECG, a 2D Doppler echocardiography and a 24-hour ambulatory ECG.
- (iii) Rescue and firefighting personnel with symptomatic sino-atrial disease are assessed as unfit.

(5) Mobitz type 2 atrio-ventricular block

Rescue and firefighting personnel with Mobitz type 2 AV block may be assessed as fit after a full cardiological evaluation confirms the absence of distal conducting tissue disease.

(6) Complete right bundle branch block

Rescue and firefighting personnel with complete right bundle branch block undergo a cardiological evaluation on first presentation.

(7) Complete left bundle branch block

A fit assessment may be considered, as follows:

(i) At first assessment, rescue and firefighting personnel may be assessed as fit after a full cardiological evaluation showing no pathology. Depending on the clinical situation, a period of stability may be required.

(ii) Rescue and firefighting personnel, during a periodic assessment of their medical fitness with a de-novo left bundle branch block may be assessed as fit after a cardiological evaluation showing no pathology. A period of stability may be required.

(iii) A cardiological evaluation is recommended after 12 months in all cases.

(8) Ventricular pre-excitation

Rescue and firefighting personnel 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 will be required including a 24-hour ambulatory ECG recording showing no tendency to symptomatic or asymptomatic tachy-arrhythmia.

(9) QT prolongation

Rescue and firefighting personnel with QT prolongation need to have a cardiological evaluation. A fit assessment may be considered in asymptomatic persons.

2. RESPIRATORY SYSTEM

(a) Rescue and firefighting personnel with significant impairment of pulmonary function are assessed as unfit. A fit assessment could be considered once pulmonary function has recovered and is satisfactory.

(b) Rescue and firefighting personnel with any sequelae of disease or surgical intervention in any part of the respiratory tract likely to cause incapacitation, are assessed as unfit. A fit assessment could be considered after a specialist evaluation.

(c) Following significant respiratory illness, physical fitness tests will be performed prior to a return to operational duty.

(d) Examination

- (1) A spirometry is required for initial examination. An FEV1/FVC ratio less than 75 % requires an 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.

(e) Chronic obstructive airways disease

Rescue and firefighting personnel with chronic obstructive airways disease are assessed as unfit. Rescue and firefighting personnel with only minor impairment of their pulmonary function may be assessed as fit after a specialist respiratory evaluation. Limitation of duties may be required. Rescue and firefighting personnel with pulmonary emphysema may be assessed as fit for limited duties excluding use of breathing apparatus following a specialist evaluation showing that the condition is stable and not causing significant symptoms.

(f) Asthma

Rescue and firefighting personnel with asthma that requires medication 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 duties. Operational limitations may be appropriate.

(g) Inflammatory disease

- (1) For rescue and firefighting personnel with active inflammatory disease of the respiratory system, a fit assessment may be considered following a specialist evaluation when the condition has resolved without sequelae and no medication is required.
- (2) Rescue and firefighting personnel with chronic inflammatory diseases may be assessed as fit following a specialist evaluation that shows mild disease with no risk of acute worsening with acceptable pulmonary function test, including bronchial challenge test, and medication compatible with the safe execution of duties. Operational limitations may be required.

(h) Sarcoidosis

- (1) Rescue and firefighting personnel with active sarcoidosis are assessed as unfit. A specialist evaluation is undertaken with respect to the possibility of systemic, particularly cardiac, involvement. A fit assessment may be considered if minimal medication is required, and the disease is limited to hilar lymphadenopathy and inactive.
- (2) Rescue and firefighting personnel with cardiac or neurological sarcoid are assessed as unfit.

(i) Pneumothorax

Rescue and firefighting personnel with a spontaneous pneumothorax are assessed as unfit. A fit assessment may be considered:

- (1) 6 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; and

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

(j) Thoracic surgery

(1) Rescue and firefighting personnel that require a thoracic surgery are assessed as unfit until such time as the effects of the operation are no longer likely to interfere with the safe exercise of their duties.

(2) A fit assessment may only be considered after satisfactory recovery and a full respiratory evaluation including a CT scan or equivalent. The underlying pathology which necessitated the surgery is considered in the assessment process.

(k) Sleep apnoea syndrome/sleep disorder

(1) Rescue and firefighting personnel with unsatisfactorily treated sleep apnoea syndrome and suffering from excessive daytime sleepiness are assessed as unfit.

(2) Rescue and firefighting personnel with obstructive sleep apnoea undergo a cardiological and pneumological evaluation.

(3) A fit assessment may be considered subject to the extent of symptoms, and satisfactory treatment.

3. DIGESTIVE SYSTEM

(a) Rescue and firefighting personnel with any sequelae of disease or surgical intervention in any part of the digestive tract or its adnexa likely to cause incapacitation, are assessed as unfit. A fit assessment may be considered after a specialist evaluation.

(b) Oesophageal varices

Rescue and firefighting personnel with oesophageal varices are assessed as unfit.

(c) Pancreatitis

(1) Rescue and firefighting personnel with pancreatitis are assessed as unfit pending an assessment. 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. A full evaluation of its use/abuse is required.

(d) Gallstones

Rescue and firefighting personnel:

(1) with a single large gallstone may be assessed as fit after an evaluation;

(2) with multiple gallstones may be assessed as fit while awaiting assessment or treatment provided that the symptoms are unlikely to interfere with duties.

(e) Inflammatory bowel disease

Rescue and firefighting personnel 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 is required.

(f) Hernia

Rescue and firefighting personnel will be free of hernia. A fit assessment may be considered subject to the extent of symptoms, satisfactory treatment and after a specialist evaluation. The risk of secondary complications or worsening should be minimal and the rescue and firefighter will be subject to regular follow-up.

(g) Dyspepsia

Rescue and firefighting personnel with recurrent dyspepsia that requires medication needs to be investigated by internal examination including radiologic or endoscopic examination. Laboratory testing includes a haemoglobin assessment. Any demonstrated ulceration or significant inflammation requires evidence of recovery before a fit assessment may be considered.

(h) Abdominal surgery

Rescue and firefighting personnel 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, are assessed as unfit. A fit assessment may be considered after full recovery, the applicant is asymptomatic, and the risk of secondary complications or recurrence is minimal.

4. METABOLIC AND ENDOCRINE SYSTEMS

(a) Rescue and firefighting personnel 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) Obese rescue and firefighting personnel (e.g. with a body mass index (BMI) ≥ 35) may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of duties. A cardiovascular risk factor review and a pneumological examination by a specialist needs to be considered. The presence of sleep apnoea syndrome needs to be ruled out.

(2) Functional testing in the working environment may be necessary before a fit assessment may be considered.

(c) Thyroid dysfunction

Rescue and firefighting personnel with hyperthyroidism or hypothyroidism attain a stable euthyroid state before a fit assessment may be considered. Follow-up includes periodic thyroid function blood tests.

(d) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels needs to be investigated. 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

Subject to an at least annual specialist endocrinological assessment, absence of complications likely to interfere with performance of duties, evidence of control of blood sugar with no significant hypoglycaemic episodes, rescue and firefighting personnel with diabetes mellitus:

- (1) that do not require medication or require non-hypoglycaemic antidiabetic medications may be assessed as fit;
- (2) that require the use of potentially hypoglycaemic medication(s) including sulphonyl ureas and insulin, may be assessed as fit with an operational limitation (or limitations), including documented testing whilst performing duties. For rescue and firefighting personnel treated with insulin, a review to include the results of operational blood sugar testing will be undertaken every 6 months;
- (3) other cardiovascular risk factors including cholesterol will require cardiovascular risk factor management. An exercise ECG will be performed when diagnosed, every 5 years under 40 years of age, and annually thereafter;
- (4) undergo HbA1c measurement every 3 months, with the exception of the rescue and firefighting personnel that do not require sulphonyl urea or insulin treatment where an extension of the testing to 6 months is acceptable; and
- (5) require annual follow-up by a specialist including demonstrating the absence of diabetic complications such as neuropathy, retinopathy, arteriopathy or nephropathy.

5. HAEMATOLOGY

(a) Rescue and firefighting personnel with any significant haematological condition are assessed as unfit. Following a specialist evaluation, a fit assessment can be considered.

(b) Anaemia

(1) Anaemia demonstrated by a reduced haemoglobin level needs to be investigated. 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, for the required duties.

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

(c) Haemoglobinopathy and red cell enzyme defects

Rescue and firefighting personnel with a haemoglobinopathy and red cell enzyme defects are assessed as unfit. A fit assessment may be considered where minor thalassaemia, sickle cell disease or other conditions are diagnosed without a history of crises and where full functional capability is demonstrated.

(d) Coagulation disorders

(1) Rescue and firefighting personnel with significant coagulation disorders are assessed as unfit. A fit assessment may be considered if there is no history of significant bleeding or clotting episodes and the haematological data indicates that there is no interference with the safe performance of duties.

(2) Rescue and firefighting personnel that require anticoagulants are assessed as unfit.

(e) 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. Regular follow-up needs to be performed.

(f) Leukaemia

(1) Rescue and firefighting personnel with acute leukaemia are assessed as unfit. Once in established remission, applicants may be assessed as fit.

(2) Rescue and firefighting personnel with chronic leukaemia are assessed as unfit. A fit assessment may be considered after remission and a period of demonstrated stability.

(3) Rescue and firefighting personnel with a history of leukaemia will have no history of central nervous system involvement and no continuing side effects from treatment likely to interfere with the safe performance of duties. Haemoglobin and platelet levels need to be satisfactory.

(4) Regular follow-up is recommended in all cases of leukaemia.

(g) Splenomegaly

Splenomegaly needs to be investigated. 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.

(h) Splenectomy

Following splenectomy, a fit assessment may be considered if there is full recovery and the platelet level is acceptable.

6. GENITOURINARY SYSTEM

(a) The urine will not contain any abnormal element considered to be of pathological significance.

(b) Rescue and firefighting personnel with any sequelae of disease or surgical procedures on the genitourinary system or its adnexa likely to cause incapacitation, in particular any obstruction due to stricture or compression, are assessed as unfit. A fit assessment may be considered following a specialist evaluation.

(c) Abnormal urinalysis

Any abnormal finding including proteinuria, haematuria and glycosuria on urinalysis needs to be investigated.

(d) Renal disease

(1) Rescue and firefighting personnel presenting with any signs of renal disease are assessed as unfit. A fit assessment may be considered if blood pressure is satisfactory and renal function is acceptable and there are no significant lesions.

(2) Rescue and firefighting personnel that require dialysis are assessed as unfit.

(e) Urinary calculi

- (1) Rescue and firefighting personnel with an asymptomatic calculus or a history of renal colic need to be investigated. A fit assessment may be considered after successful treatment for a calculus and with appropriate follow-up.
- (2) Residual calculi are disqualifying unless they are in a location where they are unlikely to move and give rise to symptoms.

(f) Renal and urological surgery

- (1) Rescue and firefighting personnel 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 are assessed as unfit until recovery is complete, the person is asymptomatic and the risk of secondary complications is minimal.
- (2) Rescue and firefighting personnel with compensated nephrectomy without hypertension or uraemia may be assessed as fit.
- (3) Rescue and firefighting personnel who have undergone renal transplantation may be considered for a fit assessment after full recovery with evidence that it is fully compensated and tolerated with only minimal immuno-suppressive therapy. Limitation(s) to duties will be considered.
- (4) Rescue and firefighting personnel 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.

7. INFECTIOUS DISEASES

(a) Rescue and firefighting personnel diagnosed with or presenting symptoms of an infectious disease will undergo specialist evaluation and may be considered fit when they are asymptomatic and providing that the therapy does not compromise the safe performance of their duties.

(b) In cases of an infectious disease, consideration is given to a history of, or clinical signs indicating, underlying impairment of the immune system.

(c) Tuberculosis

- (1) Rescue and firefighting personnel with active tuberculosis are assessed as unfit. A fit assessment may be considered following completion of therapy.
- (2) Rescue and firefighting personnel with quiescent or healed lesions may be assessed as fit. A specialist evaluation needs to consider the extent of the disease, the treatment required and possible side effects of medication.

(d) HIV positivity

- (1) Rescue and firefighting personnel 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 a neurological evaluation by an appropriate specialist needs to be carried out. A cardiological review may also be required depending on medication.

(2) Rescue and firefighting personnel with an AIDS-defining condition are assessed as unfit except in individual cases for limited duties after complete recovery and dependent on the review.

(3) The assessment of cases under (1) and (2) is dependent on the absence of symptoms or signs of the disease and the acceptability of serological markers. Treatment will be evaluated by a specialist on an individual basis for its appropriateness and any side effects.

(e) Syphilis

Rescue and firefighting personnel with acute syphilis are assessed as unfit. A fit assessment may be considered in the case of those fully treated and recovered from the primary and secondary stages.

(f) Infectious hepatitis

Rescue and firefighting personnel with infectious hepatitis are assessed as unfit. A fit assessment may be considered once the person has become asymptomatic after treatment and a specialist evaluation. Regular review of the liver function needs to be carried out.

8. OBSTETRICS AND GYNECOLOGY

(a) Gynaecological surgery

Rescue and firefighting personnel who have undergone a major gynaecological surgery undergo a specialist assessment. A fit assessment can be considered subject to a satisfactory gynaecological evaluation after successful treatment and/or full recovery after a surgery.

(b) Pregnancy

In the case of pregnancy, rescue and firefighting personnel are assessed as unfit. A fit assessment may be considered after the 12th week of gestation provided that obstetric evaluation continuously indicates a normal pregnancy. Such a fit assessment is valid until the 30th week of gestation. Additional operational limitations may be imposed. A fit assessment may be considered following a specialist assessment after full recovery following the end of the pregnancy.

9. MUSCULOSKELETAL SYSTEM

(a) Rescue and firefighting personnel will have satisfactory functional use of the musculoskeletal system to enable them to safely perform their duties.

(b) Rescue and firefighting personnel with static or progressive musculoskeletal or rheumatologic conditions or a surgery likely to interfere with the safe performance of their duties will undergo further assessment. A fit assessment can be considered subject to a satisfactory workplace assessment after successful treatment or full recovery after a surgery.

(c) Rescue and firefighting personnel with a limb prosthesis should have satisfactory functional use as demonstrated by a workplace assessment.

- (d) Rescue and firefighting personnel with any significant sequelae from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without a surgery need to have a full evaluation prior to a fit assessment.
- (e) Abnormal physique, including obesity, or muscular weakness may require a medical assessment and particular attention needs to be paid to workplace assessment.
- (f) Locomotor dysfunction, amputations, malformations, loss of function and progressive osteoarthritic disorders are assessed on an individual basis in conjunction with the appropriate operational expert with a knowledge of the complexity of the tasks of that need to be performed.
- (g) Rescue and firefighting personnel with inflammatory, infiltrative, or degenerative disease of the musculoskeletal system may be assessed as fit provided that the condition is in remission and the medication is acceptable and does not adversely affect the discharge of their duties.
- (h) For rescue and firefighting personnel who have undergone a reconstructive surgery or joint replacement procedures, particular attention will be paid to the risks associated with the particular implant or prosthesis and its functional operational range.
- (i) Where there is doubt about the operational fitness, rescue and firefighting personnel undergo the operational physical fitness assessment prior to a return to full duties. A limitation (or limitations) may be required.

10. PSYCHIATRY

- (a) Rescue and firefighting personnel with a mental or behavioural disorder due to alcohol or other use or misuse of psychoactive substances, including recreational substances with or without dependency, are assessed as unfit until after a period of documented sobriety or freedom from psychoactive substance use or misuse and subject to a satisfactory psychiatric evaluation after successful treatment.
- (b) Rescue and firefighting personnel with a psychiatric condition such as:
 - (1) mood disorder;
 - (2) neurotic disorder, e.g. claustrophobic or acrophobic symptoms;
 - (3) personality disorder;
 - (4) mental or behavioural disorder;
 - (5) post-traumatic stress disorder;
 - (6) significant stress-related symptoms; and
 - (7) single or repeated acts of deliberate self-harm,
 will undergo treatment, as necessary, and a satisfactory psychiatric assessment before a fit assessment can be considered. A psychological evaluation may be required as part of, or complementary to, a specialist psychiatric or neurological assessment.

(c) 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 OHMP, with the advice of the psychiatric specialist, will determine the duration of the period to be observed before a fit assessment can be made.
- (2) Depending on the individual case, treatment may include inpatient treatment of variable duration.
- (3) Continuous follow-up, including blood testing and peer reports, may be required indefinitely.

(d) Mood disorder

Rescue and firefighting personnel with an established mood disorder are 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 may be considered. In some cases, an operational limitation may be required. If the dosage of the medication is changed, a further period of unfit assessment is required. Regular specialist supervision needs to be considered. Any use of medication needs to be evaluated further by a specialist.

(e) Psychotic disorder

Rescue and firefighting personnel with a history, or the occurrence, of a functional psychotic disorder are assessed as unfit unless it can be confirmed that the original diagnosis was inappropriate or inaccurate or was a result of a single toxic episode.

(f) Deliberate self-harm

A single self-destructive action or repeated overt acts entail unfitness. A fit assessment may be considered after full consideration of an individual case and requires psychiatric or psychological review.

11. NEUROLOGY**(a) Rescue and firefighting personnel with an established history or clinical diagnosis of:**

- (1) epilepsy except in the cases in (b)(1) and (2) below;
 - (2) recurring episodes of disturbance of consciousness of uncertain cause; and
 - (3) conditions with a high propensity for cerebral dysfunction,
- are assessed as unfit.

(b) Rescue and firefighting personnel with an established history or clinical diagnosis of:

- (1) epilepsy without recurrence after the age of 5;
- (2) epilepsy without recurrence and off all treatment for more than 5 years;
- (3) epileptiform EEG abnormalities and focal slow waves;
- (4) progressive or non-progressive disease of the nervous system;

- (5) a single episode of disturbances or loss of consciousness;
- (6) brain injury, affliction or inflammation;
- (7) spinal or peripheral nerve injury, affliction or inflammation;
- (8) disorders of the nervous system due to vascular deficiencies including haemorrhagic and ischaemic events; and
- (9) vertigo,

need to undergo a specialist evaluation before a fit assessment may be considered.

(c) Electroencephalography (EEG)

EEG will be carried out based on the person's history or on clinical grounds.

(d) Epilepsy

(1) Rescue and firefighting personnel who have experienced one or more convulsive episodes after the age of 5 are assessed as unfit.

(2) A fit assessment may be considered if:

(i) the rescue and firefighting personnel are seizure free and off medication for at least 5 years; and

(ii) a full neurological evaluation shows that a seizure was caused by a specific non-recurrent cause, such as trauma or toxin.

(3) Rescue and firefighting personnel who have experienced an episode of benign Rolandic seizure may be assessed as fit provided that the seizure has been clearly diagnosed including a properly documented history and typical EEG result and the rescue and firefighting personnel have been free of symptoms and off treatment for at least 5 years.

(e) Neurological disease

Rescue and firefighting personnel with any stationary or progressive disease of the nervous system which has caused or is likely to cause a significant disability are assessed as unfit. A fit assessment may be considered in cases of minor functional losses associated with stationary disease after a full neurological evaluation and a workplace assessment. An operational limitation may be required.

(f) Disturbance of consciousness

Rescue and firefighting personnel 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. Operational limitations may be imposed. A full neurological evaluation is necessary.

(g) Head injury

Rescue and firefighting personnel with a head injury which was severe enough to cause loss of consciousness will be evaluated by a consultant neurologist. A fit assessment may be considered if there has been a full recovery and the risk of post-traumatic epilepsy has fallen to a sufficiently

low level. Behavioural and cognitive aspects will be taken into account where there is evidence of significant penetrating brain trauma or contusion.

12. VISUAL SYSTEM

- (a) Distant and near visual acuity, with or without optimal correction, will be 6/9 (0.7) or better in each eye separately, and visual acuity with both eyes will be 6/6 (1) or better.
- (b) Rescue and firefighting personnel need to have fields of vision and binocular function appropriate to the operational tasks.
- (c) Rescue and firefighting personnel at the initial assessment having monocular or functional monocular vision, including eye muscle balance problems, may be assessed as fit provided that an ophthalmological examination and an operational evaluation are satisfactory. Operational limitations may be necessary.
- (d) Rescue and firefighting personnel who have undergone an eye surgery are assessed as unfit until full recovery of the visual function. A fit assessment may be considered subject to a satisfactory ophthalmologic evaluation.
- (e) Rescue and firefighting personnel with a clinical diagnosis of keratoconus may be assessed as fit subject to a satisfactory examination by an ophthalmologist.
- (f) Rescue and firefighting personnel with diplopia are assessed as unfit.
- (g) Corrective lenses

If satisfactory visual function for the rescue and firefighting duties is achieved only with the use of correction, the spectacles, inserts or contact lenses must provide optimal visual function, be well tolerated, and suitable for rescue and firefighting duties, including the wearing of breathing apparatus.

- (h) Eye examination

STANDARD TESTS FOR VISION

- (1) At each medical examination, an assessment of vision will be undertaken and the eyes are examined with regard to possible pathology.
- (2) The routine eye examination includes:
 - (i) history;
 - (ii) visual acuities — near and distant vision; uncorrected and with best optical correction if needed;
 - (iii) morphology by ophthalmoscopy; and
 - (iv) further examination on clinical indication.
- (3) Visual acuity is tested using Snellen charts, or equivalent, under appropriate illumination. Where clinical evidence suggests that Snellen may not be appropriate, Landolt 'C' may be used.
- (4) All abnormal and doubtful cases are referred to an ophthalmologist. Conditions which indicate a comprehensive 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.

(5) In case of multiple pathological conditions of the eye, their effect is evaluated by an ophthalmologist with regard to possible cumulative effects. Functional testing in the working environment may be necessary to consider a fit assessment.

(i) Refractive error

Rescue and firefighting personnel without symptoms with high refractive error in excess of +5.0/-6.0 dioptres, high anisometropia >3D, or high astigmatism >3D may be assessed as fit provided that the visual standards are met in both eyes, optimal correction has been considered and no significant pathology is demonstrated. Risk of visual incapacitation arising from the refractive error or shape of the eye may be acceptable.

(j) Substandard vision

Rescue and firefighting personnel 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 an ophthalmological evaluation. Testing includes functional testing in the appropriate working environment.

(k) Heterophoria

Rescue and firefighting personnel with heterophoria (imbalance of the ocular muscles) will undergo further ophthalmological evaluation before a fit assessment is considered.

(l) Eye surgery

(1) Refractive surgery

After a refractive surgery or a surgery of the cornea including cross linking, a fit assessment may be considered, provided that:

- (i) the pre-operative refraction was less than +5 dioptres;
- (ii) satisfactory stability of refraction has been achieved (less than 0.75 dioptres variation diurnally);
- (iii) the examination of the eye shows no post-operative complications;
- (iv) the glare sensitivity is normal;
- (v) the mesopic contrast sensitivity is not impaired; and
- (vi) the specialist evaluation is undertaken by an ophthalmologist.

(2) Cataract surgery

Rescue and firefighting personnel who have undergone a cataract surgery may be assessed as fit after 6 weeks provided that the visual requirements are met either with corrective lenses, or with intraocular lenses which are non-tinted.

(3) Retinal surgery/retinal laser therapy

- (i) After a retinal surgery, rescue and firefighting personnel may be assessed fit 6 months after a successful surgery. Annual ophthalmological follow-up may be

necessary. Longer periods may be acceptable after 2 years on recommendation of the ophthalmologist.

- (ii) After successful retinal laser therapy, rescue and firefighting personnel may be assessed as fit provided that an ophthalmological evaluation shows stability.

(4) Glaucoma surgery

After a glaucoma surgery, rescue and firefighting personnel may be assessed as fit 6 months after a successful surgery. Ophthalmological examinations undertaken every 6 months 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 6 months after a surgery and after a satisfactory ophthalmological evaluation.

(6) Visual correction

Spectacles, contact lenses and mask inserts should permit the rescue and firefighting personnel to meet the visual requirements at all distances.

COLOUR VISION

- (a) Rescue and firefighting personnel who fail to correctly identify 9 or more of the first 15 plates of the 24-plate edition of Ishihara pseudoisochromatic plates undergo further specialist evaluation. A fit assessment may be considered if the results of the evaluation and/or operational testing demonstrate that the duties can be performed safely.
- (b) Advanced or fictional colour vision testing is assessed using means able to demonstrate acceptable colour vision.

13. OTORHINOLARYNGOLOGY

- (a) Rescue and firefighting personnel do not have a hearing loss of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, and 50 dB at 3 000 Hz, in either ear separately.
- (b) Rescue and firefighting personnel who do not meet the hearing criteria above will undergo a specialist assessment before a fit assessment may be considered. In these cases, the rescue and firefighting personnel undergo a functional hearing test in the operational environment. Initial candidates who do not meet the hearing criteria above will undergo a speech discrimination test.

(c) Hearing aids

A fit assessment may be considered if the use of a hearing aid (or aids) or of an appropriate prosthetic aid improves the hearing to achieve a normal standard as assessed by fully functional testing in the operational environment.

(d) Rescue and firefighting personnel with:

- (1) an active chronic pathological process 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; and

(5) significant disorder of speech or voice reducing intelligibility,

will undergo further specialist examination and assessment to establish that the condition does not interfere with the safe performance of their duties.

(e) Examination

(1) An otorhinolaryngological examination includes:

(i) history;

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

(iii) clinical assessment of the vestibular system.

(2) ENT specialists involved in the assessment of rescue and firefighting personnel should have an understanding of the functionality required.

(3) Where a full assessment and functional check is needed, due regard is paid to the operating environment in which the operational functions are undertaken.

(f) Hearing

(1) The follow-up of a rescue and firefighting personnel with hypoacusis is decided by the medical staff. If at the next annual test there is no indication of further deterioration, the normal frequency of testing may be resumed.

(2) Full functional and environmental assessments is carried out with the chosen prosthetic equipment in use.

(g) Ear conditions

Rescue and firefighting personnel with perforation is considered unfit. A fit assessment can be made following a specialist evaluation, treatment and full recovery.

(h) Vestibular disturbance

The presence of vestibular disturbance with vertigo (e.g. Meniere's disease) and spontaneous or positional nystagmus requires a complete vestibular evaluation by a specialist and entails unfitness until successful treatment and/or full recovery.

(i) Speech disorder

Rescue and firefighting personnel with a speech disorder are assessed with due regard to the operational environment in which the operational functions are undertaken. Rescue and firefighting personnel with significant disorder of speech or voice are assessed as unfit.

14. DERMATOLOGY

(a) Rescue and firefighting personnel will not have any established dermatological condition likely to interfere with the safe performance of their duties and the wearing of protective equipment. A fit assessment could be considered following a specialist dermatological assessment.

- (b) Systemic effects of radiation or pharmacological treatment for a dermatological condition will be evaluated before a fit assessment can be considered.
- (c) Rescue and firefighting personnel 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 performance of the duties and with wearing of personal protective equipment.
- (d) In cases where a dermatological condition is associated with a systemic illness, full consideration will be given to the underlying illness before a fit assessment may be considered.

15. ONCOLOGY

- (a) After diagnosis of primary or secondary malignant disease, rescue and firefighting personnel are assessed as unfit.
- (b) After completion of primary treatment and full recovery, the rescue and firefighting personnel will undergo a specialist evaluation before a fit assessment could be considered.
- (c) Rescue and firefighting personnel with an established history or clinical diagnosis of a malignant intracerebral or pulmonary tumor are assessed as unfit.
- (d) Rescue and firefighting personnel who have been diagnosed with malignant disease may be assessed as fit provided that:
 - (1) after primary treatment, there is no evidence of residual malignant disease likely to interfere with the performance of duties;
 - (2) time appropriate to the type of tumour has elapsed since the end of the 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 cardiac risk in persons who have received anthracycline chemotherapy; and
 - (5) satisfactory oncology follow-up reports are provided to the medical staff.
- (e) Rescue and firefighting personnel receiving ongoing chemotherapy (other than adjuvant preventative therapy) or radiation treatment are assessed as unfit.
- (f) Rescue and firefighting personnel with a benign intracerebral tumour may be assessed as fit after a satisfactory specialist and neurological evaluation and provided that the condition does not compromise the safe performance of duties.
- (g) Rescue and firefighting personnel with pre-malignant conditions may be assessed as fit if treated or excised as necessary and there is a regular follow-up.

GM3 ADR.OPS.B.010(a)(4) Rescue and firefighting services

PHYSICAL FITNESS EVALUATION PROGRAMME

The physical fitness of rescue and firefighting personnel will be evaluated at regular intervals. For this reason, a physical fitness evaluation programme is necessary.

The evaluation should be anti-discriminatory, non-punitive or non-competitive. The results of the evaluation may be used to establish the person's baseline or measured against the person's previous assessments.

A physical fitness evaluation will also be considered following significant absence, illness or injury prior to a return to operational duty.

The physical fitness evaluation includes:

- (a) a pre-evaluation health questionnaire;
- (b) an evaluation of aerobic capacity; and
- (c) an evaluation of muscular strength, endurance and flexibility.

PRE-EVALUATION PROCEDURE

- (a) Rescue and firefighting personnel complete a pre-assessment screening questionnaire to identify contraindications for participation in the fitness assessment.
- (b) If rescue and firefighting personnel have an incapacitating medical problem or a newly acquired chronic medical condition, the physical fitness assessment will be postponed until the rescue and firefighting personnel have been assessed as fit by the medical staff. In such circumstances, the rescue and firefighting personnel are assessed as unfit.

FITNESS TESTS

Individual physical fitness is tested as follows:

- (a) Operational fitness tests

Physical fitness is evaluated using appropriate standard protocols. The physical fitness test ensure that the rescue and firefighting personnel are able to effectively demonstrate the following representative operational competencies:

- (1) Stair or ladder climbing while carrying an additional load;
- (2) Ladder raise and extension;
- (3) Equipment carry;
- (4) Rescue drag;
- (5) Operating in an enclosed space;
- (6) Hose drill and operations;
- (7) Operating in a high temperature environment with breathing apparatus; and
- (8) Aerobic fitness assessment:
 - (i) For full operational duties, a VO₂ Max of at least the firefighters' average or better for age and gender and not less than 35 ml/kg/min is recommended.

(ii) The estimation of VO₂ Max may be performed using the following tests

- (A) Shuttle run;
- (B) Validated step test, e.g. Cooper, Chester;
- (C) Cycle ergometer;
- (D) Treadmill; and
- (E) Full spiro-ergometry

The above functions may be included as part of an operational exercise or carried out separately.

(b) Simulated operational physical fitness tests

Tests conducted in an appropriate facility may be used as an alternative for new recruits, untrained personnel or where the operational test is unavailable and where there is evidence that the simulated tests are a reasonable representation of operational tasks. The choice of the appropriate test depends on various aspects such as ease of administration, safety, cost and predictive value. The following methods may be used for the fitness evaluation of rescue and firefighting personnel:

(1) Muscular strength

- (i) Handgrip dynamometer;
- (ii) Static bicep curl with dynamometer;
- (iii) Lat pull;
- (iv) Static leg press with dynamometer;
- (v) Bench press; and
- (vi) Leg press.

(2) Muscular endurance

- (i) Push-ups, modified push-ups;
- (ii) Pull-ups;
- (iii) Bent knee sit-ups; and
- (iv) Crunches in a given time, crunches to cadence.

(3) Flexibility

- (i) Sit and reach, modified sit and reach;
- (ii) Trunk extension; and
- (iii) Shoulder elevation.