

## 1. Introduction

- a. The job of a firefighter is demanding, diverse and requires a high degree of physical fitness, agility and dexterity. Critical features of the job include:
  - Periods of intense and sustained physical activity;
  - Working in confined spaces and with poor visibility;
  - Hot and humid working environments;
  - The ability to instantly react and respond to a fire call at any time;
  - Wearing of breathing apparatus and protective clothing.
- b. The QFRS Medical Standards reflect the inherent requirements of the job of a firefighter and individuals are assessed against these standards to determine their capacity to perform the duties of a firefighter (i.e. fit for duty).
- c. Whilst the demands of fighting fires is essentially the same for auxiliary firefighters as permanent firefighters, it is recognised that the circumstances of auxiliary service may permit some accommodation in cases of minor disability.

## 2. Vision

### 2.1 Visual Acuity

- a. An individual must be able to achieve:
  - Distant - 6/9 each eye aided or unaided;
  - Near - N.5 each eye aided or unaided; and
  - Minimum standard without glasses - 6/36 in better eye.
- b. An individual may use corrective lenses to achieve the visual standard, provided that:
  - the spectacles (including the lenses) meet the requirements of Australian Standard 1337 - Eye protectors for industrial applications;
  - the spectacles cannot be dislodged during the type of strenuous physical activity required of firefighters; and
  - an adequate face seal can be maintained whilst wearing self contained breathing apparatus (SCBA).
- c. Contact lenses are not satisfactory as, if they become dislodged, they cannot be replaced while wearing SCBA.

## 2.2 Colour Vision

- a. An individual must be able to distinguish colours essential for firefighting duties.
- b. The Ishihara test will be used as a screening test.
- c. An individual identified as having a colour vision defect will be required to undertake a practical test of tasks required of firefighters. The practical test will determine whether or not the individual is fit for duty.
- d. An individual who has no trouble in day-to-day activities discriminating between reds, greens, oranges and browns is likely to pass the test.

## 3. Hearing

### 3.1 An individual must have hearing thresholds equal to or better than the following thresholds in each ear at each frequency:

- 40dB at 0.5-2 kHz; and
- 60dB at 3-4 kHz without aids.

### 3.2 An individual must also have adequate voice discrimination.

## 4. Cardiovascular fitness

### 4.1 Ischaemic Heart Disease, Angina

- a. An individual is not fit for duty if they suffer from any cardiac condition which impairs cardiac output, including the following:
  - unstable ischaemic heart disease;
  - moderate to severe valvular disease; and / or
  - cardiomyopathy.
- a. in cases of mild disease, where it is considered that they might be able to undertake firefighting duties, a report from their treating doctor, preferably a cardiologist would be required.

### 4.2 Acute Myocardial Infarction

- a. After infarction, individual cases will be judged on their merits, taking into account:
  - amount of myocardial necrosis;
  - efficacy of any revascularisation;
  - functional capacity; and
  - predisposition to ventricular tachycardia or other arrhythmia.
- b. In such cases, a report from the treating cardiologist will be required, indicating that they can undertake strenuous physical activity.

## 4.3 Arrhythmias

- a. An individual who has suffered from cardiac arrhythmias (except within the first two days of an acute myocardial infarction) is not fit for duty, unless they are symptom free for six (6) months. This must be supported with a letter from their treating cardiologist indicating that they can undertake strenuous physical activity.
- b. An individual is not fit for duty if they have an implanted defibrillator.

Please forward any cardiologist's report to the QFRS Medical Advisor for review and determination of suitability for the job.

## 5. Endocrine

### 5.1 Diabetes Mellitus

- a. An individual is not fit for duty if they suffer from insulin dependent diabetes mellitus (Type I) and are therefore at risk of hypoglycaemia.
- b. An individual with Type II diabetes taking sulphonylureas may be considered providing they are completely free of hypoglycaemia; are well controlled and in good general health; and are free of significant diabetic complications.

See Table 1 for a list of oral hypoglycaemic medication.

Table 1: Oral hypoglycaemic medication - Oral medications

Generic Name	Class	Trade Names
Acarbose		
Chlorpropamide	Sulphonylurea	Glucobay
Glibenclamide	Sulphonylurea [LONG ACTING]	Diabinese
Gliclazide	Sulphonylurea	Daonil Euglucon Glimel
glimepiride	Sulphonylurea [LONG ACTING]	Diamicron Glyade Nidem
glipizide	Sulphonylurea	Amaryl Dimirel
Metformin	Biguanide	Melizide Mellihexal Minidiab
pioglitazone		Diabex Diaformin Formet Glucohexal Glucomet Glucophage
rosiglitazone		Actos
Toglitazone		Avandia

List current as at 7 April 2006 **Sulphonylurea – risk of hypoglycaemia**

## 6. Neurological

### 6.1 Epileptic Seizures

- a. An individual is not fit for duty:
  - i if the person has had one or more epileptic seizures, however minor, in the past three years; or
  - ii if the person is receiving treatment for epileptic seizures with anti-epileptic drugs, or has received such treatment within the past three years.
- b. Classification as fit for duty may be considered in the case of (ii) above if:
  - i a person still being treated with anti-epileptic drugs, and
    - a. has had no seizures whatsoever for at least two years, and this fact has been confirmed in writing by the medical practitioners who have seen the person at least as often as each three months, and
    - b. continues to take anti-epileptic drugs in the prescribed dosage, and
    - c. has been shown to take these drugs reliably by measurement of their blood concentrations on several occasions, and

- d. has an electroencephalogram which, at the time of consideration, shows no paroxysmal disturbance.

If such an individual subsequently ceases anti-epileptic drug therapy on medical advice, his or her activities such as driving shall be suspended for a 12 month period.

There is a 20% to 30% risk of recurrence, and 70% of this risk of recurrence occurs in the first year after ceasing therapy. Thus after one year seizure free after therapy, there is less than 10% risk of another seizure.

- ii an individual person who has received anti-epileptic drugs within the past three years, but no longer does so, and
  - a. was completely free from epileptic seizures for at least three years before the anti-epileptic drug therapy was withdrawn;
  - b. has had no seizure for a continuous period for at least 12 months after ceasing drug intake, and has the supporting opinion of a treating neurologist; and
  - c. has a recent electroencephalogram which does not show paroxysmal activity.

Note that excessive fatigue may increase the risk of seizures. Consideration should be given to the impact of likely shift rosters prior to permitting a return to duty.

## 6.2 Cerebro-Vascular Disease

- a. An individual is not fit for duty if there has been a previous cerebral vascular event, (e.g. a stroke due to cerebral artery occlusion from thrombosis, embolism or vasospasm, a reversible ischaemic neurological deficit, a transient ischaemic attack, a cerebral haemorrhage or a subarachnoid haemorrhage).
- b. Classification as fit for duty may be considered if:
  - the stroke or subarachnoid haemorrhage had left the person with no neurological deficit which would interfere with that persons ability to carry out duties as a firefighter in a safe and efficient manner; and
  - the cause of the cerebral vascular event has been corrected so that the person's risk of further such events was no greater than that of a member of the general population (such a consideration might for instance apply if a cerebral aneurysm which has caused a subarachnoid haemorrhage had been satisfactorily corrected by neurosurgery).

In all cases where consideration is being given for fitness for duty, a report from the treating specialist (preferred), or general practitioner should be provided. Please forward any such report to the QFRS Medical Adviser for review and determination of suitability for the job.

## 7. Respiratory

### 7.1 Asthma

- a. While acknowledging that the diagnosis of asthma encompasses a wide spectrum of diseases, individuals with asthma will require careful assessment.
- b. In the course of their duties, firefighters might be exposed to smoke or other respiratory irritants. In addition, the use of SCBA may impose an additional burden and the cold dry air might also aggravate respiratory obstruction in those with hyper-reactive airways.
- c. A letter from the treating General Practitioner (GP) and or specialist will be of assistance in assessing individual cases, and further testing of bronchial hyperreactivity might be required.
- d. An individual with a FEV1/ FVC ratio of less than 75% will require closer examinations. However, as asthma is a reversible disease, a normal FEV1/ FVC ratio does not exclude asthma as a condition that would preclude an individual from firefighting duties. An individual with a positive history will require careful consideration even if the ratio is normal.

### 7.2 Chronic Respiratory Disease

- a. An individual is not fit for duty if they are suffering from any respiratory disease resulting in significant respiratory impairment or dyspnoea, sufficient to prevent an individual from carrying out the physical demands of the job, including:
  - chronic obstructive airways disease;
  - bronchiectasis;
  - recent or recurrent pneumothorax; and/or
  - tuberculosis.

## 8. Musculoskeletal fitness

### 8.1 Lower Limbs

- a. An individual is not fit for duty if there is arthritis or other condition in knees, hips or back of sufficient severity to prevent bending, crawling, and climbing ladders and stairs.

### 8.2 Back

- a. An individual is not fit for duty if there is a history of significant back disability which requires time off work in excess of six months in one episode.
- b. An individual may be considered fit for duty subject to practical assessment if:

there is a history of back disability with time off work in excess of 3 months in 1 episode; or

there is a history of back disability with time off work in excess of 1 month per year for any 3 years.

### 8.3 Upper Limbs and Neck

- a. An individual is not fit for duty if there is:
  - arthritis or other condition in shoulders or neck of sufficient severity to limit lifting or carrying greater than 20kg, lifting above shoulder height; and/or
  - a history of recurrent dislocation of the shoulders.

## 9. Heat Exposure

- a. An individual who suffers from any of the following will need to be carefully assessed:
  - any cardiac condition which impairs cardiac output;
  - ischaemic heart disease - see cardiovascular fitness (section 4);
  - moderate to severe valvular disease;
  - cardiomyopathy;
  - hyperthyroidism;
  - any widespread skin condition which may impair sweating;
  - obesity; and/or
  - if taking certain medication.

Table 2. Drugs that predispose to heat stress:

<b>Drugs that inhibit sweating by inhibiting cholinergic action:</b>
• antihistamines;
• beta blockers (propranolol, timolol, etc);
• anticholinergic drugs (atropine, scopolamine); and
• phenothiazine derivatives (chlorpromazine, promethazine, trifluoperazine and prochlorperazine).
<b>Drugs that increase heat load by stimulating metabolism:</b>
• thyroid preparations;
• amphetamines.
<b>Miscellaneous:</b>
• tricyclic antidepressants;
• monoamine oxidase inhibitors;
• and diuretics.

## 10. Self contained breathing apparatus (SCBA)

- a. An individual is not fit for duty if the following conditions exist:
  - any condition of neck or shoulders likely to be aggravated by wearing/carrying breathing apparatus; and/or
  - any injury, disease or deformity of the face which would prevent achieving effective seal with SCBA.

## 11. General

While the QFRS Medical Standards should, in general, be adhered to, it is impossible to allow for all possibilities. The standards cannot hope to consider every possible disease, and in the case of other medical conditions not detailed, individuals must be judged on their merits, taking into account the demands of the job.

Any variation to these standards should be supported by written medical opinion and specialist referral, where appropriate. The specialist must be aware that the person is, or is being considered to become, a firefighter, and should state this specifically in his/her opinion. It is not sufficient simply to state that an individual is "fit for work".

Medical Practitioners with a specific enquiry regarding an applicant's condition may contact [qfes.recruitment@qfes.qld.gov.au](mailto:qfes.recruitment@qfes.qld.gov.au) for further information.