

BALTIMORE COUNTY VOLUNTEER FIREMEN'S ASSOCIATION
Physician Review of Medical Conditions to Determine Readiness
For Duty as a Fire Fighter or Emergency Medical Services Responder

THIS SECTION TO BE FILLED OUT BY THE APPLICANT: (please print)

Patient Name: _____ Date of Birth: _____

Address: _____

Phone: _____ Gender: F or M Last 4 SSN: _____

Volunteer Station {Number}: _____ LOSAP Number: _____

Allergies: (List medications, foods, & latex or state none)

Current Medications to include prescription's, over-the-counter, and supplements.

Current Medical Problems:

Past Medical Problems:

Past Surgeries:

Tobacco: 1) Never / Yes (if yes, go on to #2)
2) If quit; state when and complete 3)
3) If yes, then age started and total per day at peak;

Recreational Drugs: Yes / No If yes, please explain.

Routine Exercise regimens: (describe)

Any history of prior recreational or work related exposures to a hazardous environment?
Yes or No. If yes, explain.

[Additional information for any parts of this section may be written on the back of this page]

THIS SECTION TO BE FILLED OUT BY THE PHYSICIAN:

Physician Name: _____ License #: _____ State: _____

Address: _____

Phone: _____ Fax: _____

Instruction to the examining Physician:

This section is twelve (12) pages plus the patient's cover page and must be completed in its entirety to assist in consideration for a candidate to be medically cleared to function as a firefighter.

Section I: Essential Job Tasks and Responsibilities

Sign and date once at the bottom indicating you have reviewed and understand the job tasks and responsibilities associated with firefighting.

Section II: Definition of Category A and B Medical Conditions

Sign and date once indicating you have reviewed and understand the difference between Category A and Category B medical conditions.

Section III: Medical Conditions

Initial on every line after every body system if none of the listed Category A medical conditions are present. If a Category A medical condition is present, please circle it and do NOT place your initials on that body system line. Identify 'other conditions' on the bottom of page 6 and initial either A (not cleared) or B (cleared).

Section IV: Special Considerations for candidates with lung disease)

Sign and date page 9 if candidate has lung disease or check 'not applicable'.

Section V: Special Considerations for candidates with type 1 and insulin-requiring type 2 diabetes mellitus

Sign and date page 10 if candidate has diabetes or check 'not applicable'.

Section VI: Physical Examination and Cardiac / Vision / Hearing Testing

Section VII: Disposition

Sign indicating the candidate's clearance or non-clearance to function as a firefighter.

Section I: Essential Job Tasks and Responsibilities

5.1.1 The fire department shall evaluate the following 13 essential job tasks against the types and levels of emergency services provided to the local community by the fire department, the types of structures and occupancies comprising the community, and the configuration of the fire department to determine the essential job tasks of fire department members and candidates:

(1)*Performing fire-fighting tasks (e.g., hose line operations, extensive crawling, lifting and carrying heavy objects, ventilating roofs or walls using power or hand tools, forcible entry), rescue operations, and other emergency response actions under stressful conditions while wearing personal protective ensembles and self-contained breathing apparatus (SCBA), including working in extremely hot or cold environments for prolonged time periods

(2) Wearing an SCBA, this includes a demand valve–type positive-pressure face piece or HEPA filter masks, which requires the ability to tolerate increased respiratory workloads and a sealed self-contained face mask.

(3) Exposure to toxic fumes, irritants, particulates, biological (infectious) and nonbiological hazards, and/or heated gases, despite the use of personal protective ensembles and SCBA

(4) Depending on the local jurisdiction, climbing six or more flights of stairs while wearing fire protective ensemble weighing at least 50 lbs. (22.6 kg) or more and carrying equipment/tools weighing an additional 20 to 40 lbs. (9 to 18 kg)

(5) Wearing fire protective ensemble that is encapsulating and insulated, which will result in significant fluid loss that frequently progresses to clinical dehydration and can elevate core temperature to levels exceeding 102.2°F (39°C)

(6) Searching, finding, and rescue-dragging or carrying victims ranging from newborns up to adults weighing over 200 lbs. (90 kg) to safety despite hazardous conditions and low visibility

(7) Advancing water-filled hose lines up to 2 1/2 in. (65 mm) in diameter from fire apparatus to occupancy [approximately 150 ft. (50 m)], which can involve negotiating multiple flights of stairs, ladders, and other obstacles

(8) Climbing ladders, operating from heights, walking or crawling in the dark along narrow and uneven surfaces, and operating in proximity to electrical power lines and/or other hazards

(9) Unpredictable emergency requirements for prolonged periods of extreme physical exertion without benefit of warm-up, scheduled rest periods, meals, access to medication(s), or hydration

(10) Operating fire apparatus or other vehicles in an emergency mode with emergency lights and sirens

(11) Critical, time-sensitive, complex problem solving during physical exertion in stressful, hazardous environments, including hot, dark, tightly enclosed spaces, that is further aggravated by fatigue, flashing lights, sirens, and other distractions

(12) Ability to communicate (give and comprehend verbal orders) while wearing personal protective ensembles and SCBA under conditions of high background noise, poor visibility, and drenching from hose lines and/or fixed protection systems (sprinklers)

(13) Functioning as an integral component of a team, where sudden incapacitation of a member can result in mission failure or in risk of injury or death to civilians or other team members

Operational Demands and Environmental Hazards and Risks: A fire fighter or emergency medical service (EMS) provider will be required to wear fire protective clothing and self-contained breathing apparatus (SCBA) weighing at least 50 pounds in hazardous atmospheres, perform firefighting, EMS, and rescue operations that expose you to extreme heat, toxic products of combustion, and hazardous materials. They may also be required to lift and operate heavy machinery, carry and raise ladders, and climb ladders up to 135 feet while wearing this protective clothing and SCBA. EMS providers may be required to perform heavy lifting greater than 100 pounds via patient transportation. Exertional activity may be necessary with patient resuscitation such as cardiopulmonary resuscitation. Candidates may achieve heart rates of 85 – 100% of their maximum capacity during training, EMS, rescue, and firefighting operations. It is important to remember that firefighting and providing EMS service operations occur as part of a team effort. Unnecessary or preventable injuries and accidents not only impact the individual emergency responder but also the other emergency responders who must come to their rescue or provide aid and possibly the patients or subjects who were in initial need of rescue or aid.

As an examining physician, you must consider the physical, physiological, intellectual, and psychological demands of the occupation when evaluating the candidate's ability to perform the essential job tasks. Your signature below indicates that you understand the above demands and are comfortable evaluating candidate's ability to safely function as a firefighter.

Physician initials _____

Date _____

[I have read and understand the above tasks & conditions]

Section II: Definition of Category A and B Medical Conditions

Definitions:

Category A medical conditions: medical conditions which firmly prohibit the candidate from participating in the physiologic stress of firefighting.

Category B medical conditions: medical conditions which **may affect the candidate's ability to safely perform essential job tasks**. The evaluating physician **MUST** render a definitive opinion with supporting documentation regarding a candidate's clearance to function as a firefighter when a Category B medical condition is present.

There are too many Category B conditions to list on this form. It is most important for the evaluating physician to identify Category A conditions and to NOT clear a candidate if any Category A conditions are identified (check 'A' on page 13).

The evaluating physician must use good clinical sense if other clinical conditions are present which, by definition are not listed as Category A conditions, but may affect the candidate's ability to safely function as a fire fighter. These conditions should be clearly identified

The physician's signature indicates a **firm understanding** that candidates identified as having **Category A** medical conditions **CANNOT** be medically cleared to function as a firefighter.

Additionally, the physician **will** provide supporting documentation when a candidate with a **Category B** condition is cleared to function as a firefighter. Identification of a **Category B** medical condition in a candidate that is cleared to function as a firefighter **MUST** be accompanied by supporting documentation.

Physician initials _____

Date _____

[I have read and understand the above tasks & conditions]

Section III: Medical Conditions

Category A medical conditions: medical conditions which **firmly prohibit** the candidate from participating in the physiologic stress of firefighting. More common Category A conditions are listed in each section.

INSTRUCTIONS: The physician's initials next to each category indicate that all of the **Category A** conditions listed in a given section are **NOT** present (if a condition is present, please circle the present condition and do **NOT** initial the section).

1. No head and neck conditions are present _____

- Skull of facial deformities preventing helmet use or tight fitting face mask respirator
- Unimpaired relationship between the mandible and maxilla such that a face mask respirator can be tightly sealed against the face

2. No eye and vision conditions are present _____

- Far visual field acuity less than 20/40 binocular, corrected with contact lenses or glasses
- Monochromatic vision
- Monocular vision

3. No ear or hearing conditions are present _____

- Chronic vertigo
- Hearing impairment
- Hearing aid or cochlear implant

4. No nasal, tracheal, esophageal, or laryngeal conditions are present _____

- Tracheostomy; aphonia; significant head/neck surgery affecting facial structure

5. No lung or chest wall conditions are present _____

*** Please see section IV for recommended evaluation of candidates with asthma or reactive airways diseases*

- Hemoptysis; empyema; pulmonary hypertension; active tuberculosis
- Obstructive lung disease (emphysema/COPD or chronic bronchitis)
- Lung surgery, chest wall surgery, pneumothorax, pleural effusion, interstitial lung disease, pulmonary embolism (or any history of above)
- Central or obstructive apnea (sleep apnea) unresponsive to treatment
- Asthma or reactive airways disease requiring bronchodilators or corticosteroid therapy for 2 or more consecutive months in the past 2 years

6. No cardiovascular conditions are present _____

- Coronary artery disease (any history of myocardial infarction, angina, CABG, angioplasty, or similar interventions); hypertrophic cardiomyopathy; cardiac transplantation; valvular heart disease; significant conduction abnormalities
- AICD or pacemaker insertion
- Any metabolic syndrome with aerobic capacity less than 12 METs
- Any history of syncope
- Uncontrolled or poorly controlled hypertension
- Thoracic or abdominal aortic aneurysm

- Carotid artery stenosis \geq 50%
- Peripheral vascular disease resulting in symptomatic claudication

7. No abdominal or gastrointestinal conditions are present _____

- Presence of an uncorrected inguinal or femoral hernia REGARDLESS of symptoms

8. No spinal or skeletal conditions are present _____

- Scoliosis of thoracic or lumbar spine with angle greater than or equal to 40 degrees
- Spinal surgery with rods (hardware spanning multiple spinal segments)
- Any spinal or skeletal condition producing sensory or motor deficits or pain due to radiculopathy or nerve root compression
- Any spinal or skeletal condition that frequently requires narcotic analgesic medication
- Significant vertebral fractures, compression fractures
- Joint replacement UNLESS there is normal range of motion without history of dislocation post-replacement, repetitive and prolonged pulling, bending, rotation, kneeling, crawling, and climbing can occur without pain or impairment, no limiting pain
- Amputation or congenital absence of an upper or lower extremity
- Amputation of either thumb proximal to the mid-proximal phalanx

9. No neurologic conditions are present _____

- History of TIA or CVA
- Multiple sclerosis
- Myasthenia gravis
- Dementia
- Parkinson's Disease
- Any history of single or multiple seizures (must initial 1 of the statements below):

Initials here if a candidate **had** a seizure or seizure disorder but has had NO seizures for 1 year while OFF all anti-epileptic medications _____

Initial here if a candidate **has** a seizure disorder but has had NO seizures for the past 5 years (seizure-free for past 5 years) and is on a stable medication regimen _____

10. No skin conditions are present _____

- Metastatic or locally extensive basal or squamous cell carcinoma or melanoma
- Any dermatologic condition that would preclude application of a tight fitting respirator

11. No hematologic conditions are present _____

- Hemorrhagic states requiring replacement therapy
- Homozygous sickle cell disease
- Clotting disorders or hemophilia of any type
- No full-dose or low-dose anticoagulation medications

12. No endocrine disorders are present _____

*** Please see section V for recommended evaluation of candidates with type 1 diabetes mellitus or insulin-requiring type 2 diabetes mellitus*

- Type I diabetes mellitus
- Insulin-requiring Type 2 diabetes mellitus

13. No psychiatric conditions are present _____

- Presence of any mental health disorder that is untreated, unstable, or would preclude safe function in the stressful environment of firefighting, emergency medical services, and rescue operations
- No psychiatric medications that increase the subject's susceptibility to heat exhaustion, heat stroke, or malignant hyperthermia

14. No chemical, drug, dependency/addiction conditions are present _____

- Narcotic use, including methadone
- Sedative-hypnotics
- Anabolic steroids
- Beta-blocker administration which may prevent a normal cardiac rate response to exercise
- Respiratory medications including inhaled bronchodilators, inhaled corticosteroids, theophylline, and leukotriene receptor antagonists

15. Adequate aerobic capacity _____

Adequate aerobic capacity is considered steady state performance at an exercise load of 12 metabolic equivalents (METs) or a measured aerobic capacity of at least 42 ml/kg/min. This should be established via a maximal treadmill test, NOT a field based measure or submaximal aerobic test. Specifically, steady state heart rate must be established during a testing protocol with 2-3 minute stage (e.g. Modified Bruce, Modified Balke)

Category B medical conditions: medical conditions which **may affect the candidate's ability to safely perform essential job tasks.**

Below, please list any other conditions not explicitly listed above (i.e. conditions other than Category A conditions) which may affect the candidate's ability to safely function as a fire fighter that you know the candidate to have.

OTHER CONDITIONS: (please list and initial A or B)

A. _____ The 'other conditions' identified above should **prohibit** the candidate from functioning as a fire fighter. The candidate is **NOT** clear to function.

B. _____ I do **not** feel these 'other conditions' limit the candidate's ability to safely perform the essential job tasks of a fire fighter. I would **allow** he/she to function as a fire fighter with the presence of these 'other conditions' as they pose little to no risk of injury or illness while conducting duties in the stressful environments associated with fire fighting. The candidate is **clear** to function.

Section IV: Special Considerations for candidates with lung disease or smoking

If a candidate with a history of asthma no longer feels they have asthma, they must be evaluated by a board certified pulmonologist or allergist and submit documentation that all of the following are met:

1. Asthma has resolved without symptoms off medications for at least 2 years
2. Allergen avoidance or desensitization has been successful
3. Spirometry demonstrates adequate reserve (FVC and FEV1 > or = 90%)
4. No bronchodilator response measured off all bronchodilators on the day of testing
5. Normal or negative response to provocative challenge testing (i.e. cold air, exercise 12 METs, methacholine, etc.) or negative response to exercise challenge

***The physician is *REQUIRED* to obtain PFTs for candidates with** past or active history of asthma, reactive airway disease, emphysema or **SMOKING** as the following PFT findings are also **Category A conditions** which **exclude** the candidate from participating in firefighting activities:

FVC or FEV1 < 70% predicted

Absolute FEV1/FVC less than 0.70 and with either FEV1 below normal or both the FEV1 and the FVC below normal (less than 0.80)

Your signature below indicates that you understand the above criteria and can attest that the fire fighter candidate on this applications with a history of lung disease is cleared to function as a fire fighter, including but not limited to the stress of wearing self-contained breathing apparatus in smoke filled environments.

Physician initials _____

Date _____

[I have read and understand the above tasks & conditions]

_____ **CHECK HERE IF SECTION IV NOT APPLICABLE: candidate does NOT have any form of lung disease**

Section V: Special Considerations for candidates with type 1 diabetes mellitus and insulin or oral hypoglycemic-requiring type 2 diabetes mellitus

For subjects that are diabetic, please initial only those lines that are true & correct.

(1) Diabetes Mellitus, UNLESS a candidate meets all of the following criteria they are not considered as passing:

_____ (a) Is maintained by a physician knowledgeable in current management of diabetes mellitus on a basal/bolus (can include subcutaneous insulin infusion pump) regimen using insulin analogs.

_____ (b) Has demonstrated over a period of at least 6 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration. Assessment of this shall take into consideration the erratic meal schedules; sleep disruption, and high aerobic and anaerobic workloads intrinsic to firefighting.

_____ (c) Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.

_____ (d) Has normal renal function based on calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24 hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumen per gram of creatinine in a random sample).

_____ (e) Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 1- gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy might be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability).

_____ (f) Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 MET) by ECG and cardiac imaging.

_____ (g) Has a signed statement and medical records from an endocrinologist or a physician with demonstrated knowledge in the current management of diabetes mellitus as well as knowledge of the essential job tasks and hazards of firefighting as described in pages 3-4, allowing the fire department physician to determine whether the candidate meets the following criteria:

_____ (i) Has had a hemoglobin A1C measured at least four times a year (intervals of 2 to 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. A hemoglobin A1C reading 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels. This shall include evidence of a set schedule for blood glucose monitoring and thorough review of data from such monitoring.

_____ (ii) Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.

_____ (iii) Has had NO EPISODES OF SEVERE HYPOGLYCEMIA (defined as requiring the assistance of another) in the PRECEDING ONE YEAR, with no more than two episodes of severe hypoglycemia in the preceding three years.

_____ (iv) Is certified not to have a medical contraindication to fire-fighting or emergency medical services training and operations.

Physician initials _____

Date _____

[I have read and understand the above tasks & conditions]

_____ **CHECK HERE IF NOT APPLICABLE: candidate does NOT have any form of diabetes**

Section VI: PHYSICAL EXAMINATION

Examining Physician Info: _____ License #: _____ State: _____

Address: _____

Phone: _____ Fax: _____

EXAMINATION

HEIGHT: ___Ft___inches WEIGHT: _____ LBS / KG

B/P: _____/_____ PULSE: _____ RR: _____

Room Air Sat (Pulse Ox): _____

Head: Facial deformity that would interfere with a face mask seal; present / absent

Eyes:

Ears: TM's intact; yes / no

Nose: patent; yes / no

Throat:

Neck:

 Masses; yes / no JVD; yes / no

Chest: Clear / Not clear (explain)

Heart:

 Regular / Irregular Murmur / No murmur

Back:

Abdomen

Hernia:

Arms:

Legs:

Neuro:

GU:

Skin:

(Explain any significant physical findings in detail)

TESTING:

1) CARDIAC EXERCISE TOLERANCE TEST (AKA Cardiac Stress Test)

***All subjects assessed to be at intermediate or higher risk for ASCVD must be further evaluated using a symptom-limited exercise stress test (EST) to at least 12 METS.

*** Negative ESTs shall be repeated at least every 2-5 years or as clinically indicated.

Results must be attached to this form.

Subject reaches 12 METS without evidence of ischemia: YES or NO (*circle one*)

Physician initials _____

2) VISION TESTING: Glasses or contact lens? _____

Previous Eye surgical Procedure? _____

Color Blindness? Yes / No If yes, then type: _____

Testing without glasses or contacts: Yes / No

Right Eye: Far: _____/_____ Near: _____/_____

Left Eye: Far: _____/_____ Near: _____/_____

Depth Perception: Normal / Abnormal

Peripheral Vision: Normal / Abnormal

3) AUDIOMETRIC TESTING:

Results: Within Range Out of Range

Comments: _____

4) -ECG: (Indications include age 50 or above, diabetes, HTN, or any cardiac history)

Results: _____ Attach copy

-Cardiac Ultrasound (Echo): (for cardiac issues or murmur, if indicated. Attach report)

5) PULMONARY FUNCTION TESTING. See Section IV. (Required to obtain PFTs for candidates with past or active history of asthma, reactive airway disease, emphysema or smoking)

Results: _____ Attach copy

6) CHEST X-RAY: (Indications include history of pulmonary disease or findings, smoking, or history of Tuberculosis or positive PPD skin test)

Results: _____ Attach report copy

7) BLOOD TESTS ORDERED: (required testing to match medical history or issues)

Results: _____ Attach report copy

8) URINALYSIS ORDERED: (required testing to match medical history or issues)

(Indicated for diabetes and hypertension)

Results: _____ Attach report copy

Section VII: Disposition

Disposition:

The purpose of this form is to determine firefighter and emergency medical service personnel who can function as entry personnel in an environment that is an immediate danger to life or health.

A. _____ The candidate's current medical issues **do not allow** the candidate to participate in firefighting or emergency medical service operations.

B. _____ In my professional opinion, the candidate **should be cleared to function** in firefighting or emergency medical service operations.

C. _____ I need to discuss case with a BCVFA Medical Board Physician. Please indicate a means that you may be contacted. Please allow a seven to ten day period for the Board to initiate this contact.

I affirm that I have:

1) read the instructions, **Section I: Essential Job Tasks and Responsibilities and Section II: Definition of Category A and B Medical Conditions.**

2) Date of examination: ___/___/___ to determining the candidate's ability to function as a fire fighter or emergency medical service provider.

Signature: _____

Printed Name: _____

Thank you for your time and effort.

Phone: (410) 887-4885

Return or Mail this form in its entirety to:

Baltimore County Volunteer Firemen's Association
Att: Medical Board
Public Safety Building
700 East Joppa Road
3rd Floor
Towson, MD 21286