

### **NFPA Medical Conditions Form**

#### **Medical Conditions Affecting Ability to Safely Perform Essential Job Tasks**

*"Candidates with Category "A" medical conditions shall not be certified as meeting the medical requirements of this standard."*

NFPA 1582 – CATEGORY "A" MEDICAL CONDITIONS NOT ACCEPTED

#### **SECTION 6.3 – HEAD AND NECK**

- Defect of skull preventing helmet use or leaving underlying brain unprotected from trauma.
- Any skull or facial deformity that would not allow for a successful respiratory facepiece fit test.
- Any head or neck condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.4 – EYES AND VISION**

- Far visual acuity worse than 20 / 40 binocular, corrected with contact lenses or spectacles, or far visual acuity worse than 20 / 100 binocular for wearers of hard contacts or spectacles, uncorrected.
- Monochromatic vision resulting in inability to use imaging devices such as thermal imaging camera.
- Monocular vision
- Any eye condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.5 – EARS AND HEARING**

- Chronic vertigo or impaired balance as demonstrated by the inability to tandem gait walk.
- On audiometric testing, without the aid of a hearing assistance device, average hearing loss in the unaided better ear greater than 40 decibels (dB) at 500 hertz (Hz), 1000 Hz, 2000 Hz, and 3000 Hz when the audiometric device is calibrated to ANSI Z24.5.

*Audiometric Device Testing.*

- Any ear condition (or hearing impairment) that results in a person not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.6 – DENTAL**

- Any dental condition that results in inability to safely perform one or more of the essential job tasks.

#### **SECTION 6.7 – NOSE, OROPHARYNX, TRACHEA, ESOPHAGUS AND LARYNX**

- Tracheostomy.
- Aphonia.

- Any nasal, oropharyngeal, tracheal, esophageal or laryngeal condition that results in inability to safely perform one or more of the essential job tasks, including fit testing for respirators used by the fire department and SCBA for fire and hazmat operations.

#### **SECTION 6.8 – LUNGS AND CHEST WALL**

- Active haemoptysis
- Current empyema
- Pulmonary hypertension
- Active tuberculosis
- A forced vital capacity (FVC) or forced expiratory volume in 1 second (FEV) less than 70 percent predicted even independent of disease
- Obstructive lung diseases (e.g., emphysema, chronic bronchitis, asthma) with an FEV / FVC less than 0.70, with either the FEV below normal or both the FEV and the FVC below normal (i.e., less than 0.80).
- Hypoxemia – oxygen saturation less than 90 percent at rest or exercise desaturation by 4 percent or to less than 90 percent exercise testing indicated when resting oxygen is less than 94 percent but greater than 90 percent..
- Asthma, including reactive airways disease requiring bronchodilator or corticosteroid therapy at least once in the previous 2 years, unless the candidate can meet the requirement in 6.8.1.1
- Any pulmonary condition that results in the candidate not being able to safely perform one or more of the essential job tasks.
- Lung transplant
- Obstructive sleep apnea with excessive daytime sleepiness, unless all the following criteria are met:
  - Successful treatment
  - Documentation of compliance with CPAP, for sleep study with an oral appliance, or of sleep study after surgery
  - No excessive daytime sleepiness with treatment
- 6.8.1.1\* - A candidate who has been diagnosed with asthma or has in the past required bronchodilator, corticosteroid, or anti-inflammatory therapy (e.g., a leukotriene receptor antagonist, such as montelukast) shall be evaluated by a pulmonologist or other expert in asthmatic lung diseases, such as an allergist, to determine if the candidate meets all the following:
  - The applicant denies bronchospasm during exertion, temperature/humidity extremes, or irritant exposures.
  - The applicant denies the use of bronchodilator rescue medications during exertion, temperature/humidity extremes, or irritant exposures.
  - The applicant's asthma has not required systemic corticosteroids, emergency room treatment, or hospital admission in the past 2 years.
  - Allergen avoidance or desensitization has been successful.
  - Spirometry demonstrates adequate reserve (FVC and FEV1 greater than or equal to 90 percent) and no bronchodilator response measured off all bronchodilators on the day of testing.
  - Normal or negative response (less than 20 percent decline in FEV1) to provocative challenge testing(e.g., cold air, exercise (12 METS) methacholine (PC20 greater than 8 is considered normal, as response at dose greater than 8 mg/ml might not be

clinically significant), histamine, mannitol, or hypertonic saline) or negative response to exercise challenge.

- Challenge testing shall be performed off all anti-inflammatory medications (e.g., inhaled or oral steroids, leukotriene receptor antagonists) for 4 weeks preceding the test, off all antihistamines (e.g., oral allergy medications) for 1 week, and off all bronchodilators on the day of testing.

#### **SECTION 6.9 AEROBIC CAPACITY**

- An aerobic capacity less than 12 metabolic equivalents (METs)

#### **SECTION 6.10 – HEART AND VASCULAR SYSTEM**

##### **SECTION 6.10.1 – HEART**

- Clinically significant Coronary artery disease, myocardial infarction, angina pectoris, coronary artery bypass surgery, coronary angioplasty and similar procedures.
- Cardiomyopathy or congestive heart failure, including signs or symptoms of compromised left or right ventricular function, including dyspnea, S3 gallop, peripheral edema, enlarged ventricle, abnormal ejection fraction and/or inability to increase cardiac output with exercise.
- Acute pericarditis, endocarditis or myocarditis
- Syncope, recurrent
- Any medical condition requiring an automatic implantable cardiac defibrillator, unless the condition no longer requires an automatic implantable cardiac defibrillator, or a medical history of ventricular tachycardia or ventricular fibrillation due to ischemic or valvular heart disease or cardiomyopathy.
- Third-degree atrioventricular block.
- Cardiac pacemaker, if the applicant is pacemaker-dependent
- Hypertrophic cardiomyopathy, including Idiopathic hypertrophic subaortic stenosis.
- Any cardiac condition that results in the candidate not being able to safely perform one or more of the essential job tasks.
- Heart transplant

##### **SECTION 6.10.2 – VASCULAR SYSTEM**

- Hypertension
  - uncontrolled or poorly controlled hypertension
  - hypertension with evidence of end organ damage
- Thoracic or abdominal aortic aneurysm.
- Carotid artery stenosis or obstruction resulting in greater than or equal to 50 percent reduction in blood flow.
- Peripheral vascular disease resulting in symptomatic claudication.
- Any other vascular condition that results in inability to safely perform one or more of the essential job tasks.

##### **SECTION 6.11 – ABDOMINAL ORGANS AND GASTROINTESTINAL SYSTEM**

- Presence of uncorrected inguinal/femoral hernia, if symptomatic.
- Any gastrointestinal condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.12 – METABOLIC SYNDROME**

- Metabolic syndrome with aerobic capacity less than 12 METs

#### **SECTION 6.13 – REPRODUCTIVE SYSTEM**

- Any genital condition that results in inability to safely perform one or more of the essential job tasks.

#### **SECTION 6.14 – URINARY SYSTEM**

- Renal failure or insufficiency requiring continuous ambulatory peritoneal dialysis (CAPD) or haemodialysis.
- Any urinary condition that results in the candidate not being able to safely perform one or more of the essential job tasks.
- Chronic kidney disease of Stage 4 or greater glomerular filtration rate (GFR) , 1 oz/min (30 ml/min).

#### **SECTION 6.15 – SPINE AND AXIAL SKELETON**

- Scoliosis of thoracic or lumbar spine with angle greater than or equal to 40 degrees.
- Any spinal or skeletal condition producing sensory or motor deficits or pain due to radiculopathy or nerve compression.
- Any spinal or skeletal condition causing pain that frequently or recurrently requires narcotic analgesic medication.
- Cervical vertebral fractures with multiple vertebral body compression greater than 25 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (i.e., partial, moderate, severe), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery.
- Thoracic vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (e.g., severe – with or without surgery), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery.
- Lumbrosacral vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (i.e., partial, moderate, severe), fragmentation, abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery.
- History of spine surgery or injury that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.16 – EXTREMITIES**

- Joint replacement, unless all the following conditions are met:
  - Normal range of motion without history of dislocations post-replacement
  - Repetitive and prolonged pulling, bending, rotations, kneeling, crawling and climbing without pain or impairment
  - No limiting pain
  - Evaluation by an orthopedic specialist who concurs that the candidate can complete all essential job tasks listed in Chapter 5
- Amputation or congenital absence of upper-extremity limb (hand or higher).

- Amputation of either thumb proximal to the mid-proximal phalanx.
- Amputation or congenital absence of lower-extremity limb (foot or above) unless the candidate meets all of the following conditions:
  - Stable, unilateral below-the-knee (BKA) amputation with at least the proximal third of the tibia present for a strong and stable attachment point with the prosthesis
  - Fitted with a prosthesis that will tolerate the conditions present in fire fighting when worn in conjunction with standard fire-fighting PPE.
  - At least 6 months of prosthetic use in a variety of activities with no functional difficulties.
  - Amputee limb healed with no significant inflammation, persistent pain, necrosis, or indications of instability at the amputee limb attachment point.
  - No significant psychosocial issues pertaining to the loss of limb use of prosthesis.
  - Evaluated by a prosthetist or orthopedic specialist with expertise in the fitting and function of prosthetic limbs who concurs that the candidate can complete all essential job tasks listed in Chapter 5, including wearing personal protective ensembles and SCBA while climbing ladders, operating from heights and walking or crawling in the dark along narrow and uneven surfaces that may be wet or icy.
  - Has passed the department's applicant physical ability test as a condition of appointment without accommodations or medication of the protocol
- Chronic nonhealing or recent bone grafts
- History of more than one dislocation of shoulder without surgical repair or with history of recurrent shoulder disorders within the last 5 years with pain or loss of motion, and with or without radiographic deviations from normal.
- Any extremity condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.17 – NEUROLOGICAL DISORDERS**

- All single unprovoked seizures and epileptic conditions, including simple partial, complex partial, generalized, and psychomotor seizure disorders other than the seizure disorders meeting all of the following conditions:
  - No seizures for the most recent consecutive 5 years after single unprovoked seizure
  - No seizures for the most recent consecutive 10 years if the applicant was diagnosed with epilepsy
  - Currently on a stable regimen of antiepileptic drugs for the most recent 5 years, or on no antiepileptic drugs for the most recent 5 years
  - Normal neurological examination results
  - Normal brain MRI results
  - Normal awake and asleep photic stimulation and hyperventilation EEG study results
  - A definitive statement from a qualified neurological specialist that the candidate meets the criteria specified in 6.17.1(1) and is neurologically cleared for fire-fighting training and the performance of a fire fighter's essential job task
- Ataxias of heredo-degenerative type.
- Cerebral arteriosclerosis as evidenced by a history of transient ischemic attack, reversible ischemic neurological deficit, or ischemic stroke.
- Hemiparalysis or paralysis of a limb.

- Multiple sclerosis with activity or evidence of progression within the previous 3 years.
- Myasthenia gravis with activity or evidence of progression within the previous 3 years.
- Progressive muscular dystrophy or atrophy.
- Uncorrected cerebral aneurysm.
- Dementia (e.g., Alzheimer's and other neurodegenerative diseases) with symptomatic loss of function or cognitive impairment (e.g., less than or equal to 28 on Mini-Mental Status Exam).
- Parkinson's disease and other movement disorders resulting in uncontrolled movements, bradykinesia, or cognitive impairment (e.g., less than or equal to 28 on Mini-Mental Status Exam).
- Narcolepsy with cataplexy
- Narcolepsy with persistent excessive daytime sleepiness despite medical treatment
- Amyotrophic lateral sclerosis (ALS)
- Any neurological condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.18 – SKIN**

- Metastatic or locally extensive basal or squamous cell carcinoma or melanoma.
- Any dermatologic condition that would not allow for a successful fit test for any respirator required by the fire department.
- Any dermatologic condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.19 – BLOOD AND BLOOD-FORMING ORGANS**

- Hemorrhagic states requiring replacement therapy.
- Sickle cell disease (homozygous).
- Clotting disorders.
- Any haematological condition that results in inability to safely perform one or more of the essential job tasks.

#### **SECTION 6.20 – ENDOCRINE AND METABOLIC DISORDERS**

- Type 1 diabetes mellitus, unless a candidate meets all of the following criteria:
  - 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.
  - 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 fire fighting.
  - 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.
  - Has normal renal function based on a 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 albumin per gram of creatinine on a random sample).

- 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 10-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.)
- Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 MET) by ECG and cardiac imaging.
- Has a signed statement from an endocrinologist knowledgeable in management of diabetes mellitus as well as the essential job tasks and hazards of fire fighting as described in 5.1.1, allowing the fire department physician to determine whether the candidate meets the following criteria:
  - Is being successfully maintained on a regimen consistent with 6.20.1(1)(a) and 6.20.1(1)(b).
  - Has had 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 of 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 a thorough review of data from such monitoring.
  - Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
  - Has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding 1 year, with no more than two episodes of severe hypoglycemia in the preceding 3 years.
  - Is certified not to have a medical contraindication to fire-fighting training and operations.
- Insulin-requiring Type 2 diabetes mellitus, unless a candidate meets all of the following criteria:
  - Is maintained by a physician knowledgeable in current management of diabetes mellitus.
  - Has demonstrated over a period of at least 3 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 fire fighting.
  - 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.
  - Has normal renal function based on a 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 albumin per gram of creatinine in a random sample.)

- 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 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy can be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
- Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METS) by ECG and cardiac imaging.
- Has a signed statement from an endocrinologist knowledgeable in management of diabetes mellitus as well as the essential job tasks and hazards of fire fighting as described in 5.1.1 that the candidate meets the following criteria:
  - Is maintained on a stable insulin regimen and has demonstrated over a period of at least 3 months the motivation and understanding required to closely monitor and control capillary blood glucose levels despite varied activity schedules through nutritional therapy and insulin administration.
  - Has had 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 of 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 a thorough review of data from such monitoring.
  - Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
  - Has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding 1 year, with no more than two episodes of severe hypoglycemia in the preceding 3 years.
  - Is certified not to have a medical contraindication to fire-fighting training and operations.
- Any endocrine or metabolic condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.21 – SYSTEMIC DISEASES AND MISCELLANEOUS CONDITIONS**

- Any systemic condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

#### **SECTION 6.22 – TUMORS AND MALIGNANT DISEASES**

- Malignant disease that is newly diagnosed, untreated, or currently being treated, or under active surveillance due to the increased risk for reoccurrence, unless not interfering with the performance of the essential job tasks.
- Any tumour or similar condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

**SECTION 6.23 – PSYCHIATRIC CONDITIONS**

- Any psychiatric condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

**SECTION 6.24 – CHEMICALS, DRUGS, AND MEDICATIONS**

- Those that require chronic or frequent treatment with any of the following medications or classes of medications:
  - Narcotics, including methadone.
  - Sedative-hypnotics.
  - Full-dose or low-dose anticoagulation medications or any drugs that prolong prothrombin time (PT), partial thromboplastin time (PTT), or international normalized ratio (INR).
  - Beta-adrenergic blocking agents at doses that prevent a normal cardiac rate response to exercise, high-dose diuretics, or central acting antihypertensive agents (e.g., clonidine).
  - Respiratory medications: inhaled bronchodilators, inhaled corticosteroids, systemic corticosteroids, theophylline, and leukotriene receptor blockers/antagonists (e.g., montelukast).
  - High-dose corticosteroids for chronic disease.
  - Anabolic steroids.
  - Any chemical, drug, or medication that results in the candidate not being able to safely perform one or more of the essential job tasks.

**For reference, a complete copy of the NFPA 1582 standard can be purchased from the National Fire Protection Association at [www.nfpa.org](http://www.nfpa.org)**

As the physician representing \_\_\_\_\_, I deem that the applicant meets the medical requirements noted above. Any contradictions shall be noted above.

\_\_\_\_\_  
Physician's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Physician's Stamp

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For further information, please check our website at [www.kelowna.ca/careers](http://www.kelowna.ca/careers)  
and click on *Firefighter Recruitment*