

**The Commonwealth of Massachusetts**

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**COMMUNICATION**

**from the**

**HUMAN RESOURCES DIVISION**

**of the**

**EXECUTIVE OFFICE**

**for**

**ADMINISTRATION AND FINANCE**

**SUBMITTING PROPOSED REGULATIONS FOR**

**INITIAL MEDICAL AND PHYSICAL  
FITNESS STANDARDS TESTS OF MUNICIPAL  
PUBLIC SAFETY PERSONNEL**

(under the provisions of section 61A of Chapter 31  
and section 5(3)(e) of Chapter 32  
of the General Laws)

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July 28, 2014

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THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE FOR ADMINISTRATION AND FINANCE  
**HUMAN RESOURCES DIVISION**  
ONE ASHBURTON PLACE, BOSTON, MA 02108

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Chief Human Resources Officer

July 28, 2014

William F. Welch  
Clerk of the Senate  
24 Beacon Street  
Room 335 - State House  
Boston, MA 02133

Dear Mr. Welch:

In accordance with the provisions of Sections 61A of Chapter 31 and Section 5 (3)(e) of Chapter 32 of the Massachusetts General Laws, I am submitting regulations for Initial Hire Medical and Physical Fitness Standards Tests of Municipal Public Safety Personnel. In addition to the new police officer medical standards for Police Departments, the Human Resources Division has adopted the National Fire Protection Association's Standard on Comprehensive Occupational Medical Program for Fire Departments. The medical and physical fitness standards are designed as pre-employment evaluations for police officers and firefighters. In the one hundred and ninety communities subject to this law, police officers and firefighters appointed after November 1, 1996 must meet the Human Resources Division's medical standards before they may begin employment.

The police officer and firefighter medical standards have been revised to incorporate findings from medical professionals who have conducted considerable research into the areas of job and task functionality and the way in which an individual's medical and physical condition aligns with his or her specific job tasks.

In accordance with Section 61A of MGL Chapter 31, as the Clerk of the House, please refer these proposed amendments to the appropriate standing committees of the House of Representatives. I look forward to any commentary or recommendations that the committees may offer.

If you have any questions or need additional information, please contact John Marra, General Counsel, at [jmarra@hrd.state.ma.us](mailto:jmarra@hrd.state.ma.us) or Regina Caggiano, Deputy Director Civil Service, at [Regina.Caggiano@hrd.state.ma.us](mailto:Regina.Caggiano@hrd.state.ma.us).

Sincerely,

A handwritten signature in cursive script that reads "Paul Dietl".

Paul Dietl  
Chief Human Resources Officer

Enclosures

**Regulations for Initial Medical and Physical  
Fitness Standards Test  
For Municipal Public Safety Personnel**

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**Regulations for Initial Medical and Physical Fitness Standards Tests for Municipal Public  
Safety Personnel  
(Effective September XX, 2014)**

**01 Purpose**

The purpose of the initial medical and physical fitness standards programs is to minimize health and safety risks to the public, fellow workers and police officers and fire fighters themselves. These standards are promulgated pursuant to M.G.L. c.31, s.61A and c.32, s.5 (3) (e).

**02 Definitions**

Cardiovascular Fitness Cardiovascular Fitness (aerobic endurance, stamina) is a measure of heart and lung function. It is the ability to maintain whole body activity for a length of time without fatiguing or running out of breath.

Category A Medical Condition A medical condition that would (1) preclude an individual from performing the essential job functions of a municipal fire fighter or police officer in a training or emergency operational environment, or (2) present a significant risk to the safety and health of that individual or others.

Category B Medical Condition A medical condition that, based on its severity or degree, may or may not (1) preclude an individual from performing the essential job functions of a municipal fire fighter or police officer in a training or emergency operational environment, or (2) present a significant risk to the safety and health of that individual or others.

Flexibility Flexibility is a measure of the range of motion at a joint. Adequate levels of flexibility are necessary in order to make daily movements with ease.

Initial Standards Tests to determine if job candidates possess the abilities to perform the essential functions of their jobs, and have no disqualifying conditions. This term applies to both medical and physical fitness standards.

Medical Standards Medical (or Health ) Standards are tests of various health status categories that are demonstrably related to an occupation. These tests are designed to ensure that employees have no disqualifying conditions and have the physical attributes that will permit performance of the essential functions of their jobs.

Muscular Endurance Muscular Endurance is a measure of a muscle's ability to maintain a submaximal force or repeatedly apply a submaximal force without a rest; that is, the number of times one can lift a certain amount of weight. Adequate levels of muscular endurance allow one's muscles to perform a task for a longer period of time before the muscles get tired.

Muscular Strength Muscular Strength (also referred to simply as "strength") is a measure of the greatest amount of force a muscle can apply; that is, the most weight a muscle group can move at one time.

Physical Fitness Physical Fitness is defined as "the ability to carry out daily tasks with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure-time pursuits and to meet unforeseen emergencies" (President's Council on Physical Fitness and Sports). An adequate level of physical fitness is required to perform many jobs and to provide energy for recreational activities. Physical fitness consists of the following components: cardiovascular fitness, muscle strength, muscular endurance, and flexibility. In order to perform optimally at work and in our other daily activities it is necessary to develop and maintain adequate levels of fitness in each of these components.

Physical Fitness Standards Physical Fitness Standards are tests of physical abilities that are demonstrably related to an occupation. These tests are designed to ensure that employees have the physical abilities required to perform the essential functions of their jobs.

Standards and Wellness Community A standards and wellness community is a community that is subject to the requirements of MGL Chapter 31, Sections 61A and 61B, either through independent acceptance of these sections, or through acceptance of Chapter 32, Section 22D. The Human Resources Division (HRD) periodically promulgates a list of standards and wellness communities.

### **03 Eligibility Criteria**

(1) These Initial Medical and Physical Fitness Standards Programs apply to each individual who receives an offer of employment from a fire or police department in a standards and wellness community, that is one that accepted or is deemed to have accepted M.G.L. c. 32, s.22D or that has independently accepted M.G.L. c.31, s.61A and s. 61B. Every individual hired after November 1, 1996 in a standards and wellness community police or fire department is subject to the initial medical and physical fitness standards programs as promulgated by the Personnel Administrator.

### **04 Timing of Standards Tests**

(1) Initial Standards Examinations (Examination and Re-examination) Effective November 2, 1996, every new hire in standards and wellness communities must take Initial Medical and Physical Fitness Standards Examinations within thirty days of the date of appointment. Each candidate who does not pass the Medical Standards Examination will not be permitted to take the Physical Fitness Standards Examination unless and until he/she passes the Medical Standards Examination. Any candidate who does not appear for his/her scheduled examination or re-examination will be determined to have failed that examination or re-examination. Any candidate who fails the Medical Standards Examination or Physical Fitness Standards Examination may be re-tested *within* sixteen weeks. Any candidate who fails the Medical Standards Test or Physical Fitness Standards Test upon re-examination (second attempt) will have his/her appointment rescinded.

### **05 Medical Standards Examinations and Re-examinations**

(1) Conducting Medical Standards Examinations and Re-examinations Medical Standards Examinations shall be conducted by physicians in conformance with the guidelines and forms promulgated by the Massachusetts Human Resources Division. All decisions concerning whether or not an individual passes the Medical Standards Examination must be based upon the individual's ability to perform the essential functions of the job. The physician conducting the Medical Standards Examination or Re-examination is responsible for conducting a thorough and complete examination. Medical Standards Examinations and Re-examinations must be conducted by a physician approved by the standards and wellness community for which the candidate seeks to work.

(2) Review of Medical Standards Examinations and Re-examinations Standards and wellness communities' physicians are responsible for reviewing the results of the examinations and advising HRD, the hiring department and the candidate whether or not the candidate has passed the Medical Standards Examination.

(3) Medical Standards Records Information and records concerning an individual's Medical Standards Examination must be kept confidential and in conformance with medical records requirements.

(4) Incomplete Medical Standards Examinations or Re-examinations Any community that concludes that a physician has conducted an incomplete or less than thorough Medical Standards Examination is required to notify HRD and return the results of the exam to the physician with an explanation of the reasons for their conclusion. The physician is then required to review the community's concerns and respond to those concerns in a thorough and complete manner.



## **06 Physical Fitness Standards Examinations and Re-examinations**

(1) Monitors Each examination monitor must be trained and must understand his/her roles and areas of responsibility as prescribed by the Human Resources Division. Each test site must be supervised by a monitor-in-charge who is responsible for all operations at the site, including testing of events and equipment to ensure that everything is working properly and safely. The monitor-in-charge is responsible for supervising the work of all monitors. An Emergency Medical Technician must be present during all testing and is responsible for the operation of the Safety Plan.

(2) Safety Plan Each testing site must have a safety plan in place for responding to any emergency situation. The safety plan shall include the following:

(a) Administration of a Self-evaluation questionnaire (PAR Q) to each individual who intends to participate in the fitness test to determine physical readiness for testing.

(b) Screening of blood pressure, pulse rate and oral temperature of each candidate to ensure that these measurements are within normal limits on the day of testing.

(c) Emergency Medical Technician on site who will be responsible for implementing the necessary precautions (screenings and evaluation) and responding to or obtaining the needed medical assistance in case of an emergency situation.

(d) Reports must be made to HRD and the hiring department documenting any injuries or medical emergencies that occur during the physical fitness testing.

(3) Examination Administration Each monitor must examine every individual by delivering the authorized instructions for each event, in the same manner, accurately scoring the individual's performance, and precisely recording all scores on the score sheets provided by HRD. The instructions for each event will be provided by the Human Resources Division. Any candidate who fails the test will be informed by the Monitor-in-Charge of his/her test results and provided with guidance on how to prepare for his/her re-examination. All examination results will be kept confidential.

(4) Examination Preparation Each individual should be permitted sixteen weeks to prepare for the Physical Fitness Standards Examination. Each individual will be provided with a Test Preparation Guide promulgated by HRD to assist them in their preparation. Prior to any re-examination candidates will be afforded sixteen weeks to prepare. Individuals who wish to waive the sixteen weeks in order to undergo an examination or re-examination may do so.

## **07 Medical Standards Examinations for Municipal Fire Fighters**

(1) Medical Evaluation: Each municipal fire department shall establish and implement a pre-placement medical evaluation for candidates. During the medical evaluation, the physician shall evaluate each individual to ascertain the presence of any medical conditions listed in these standards, or any medical conditions not listed which would prevent the individual from performing the essential job functions without posing significant risk. It is our intent to encourage the use of professional judgment regarding medical conditions which are not specifically listed. A candidate shall not be certified as meeting the medical requirements of these standards if the physician determines that the candidate has any Category A medical condition specified in these standards. Furthermore, a candidate shall not be certified as meeting the medical requirements of these standards if the physician determines that the candidate has a Category B medical condition that is of sufficient severity to prevent the candidate from performing the essential functions of a fire fighter without posing a significant risk to the safety and health of him/herself or others.

(2) The medical evaluation shall minimally include the following:

- (a) a comprehensive medical history
- a baseline (pre-placement) occupational history, including significant past exposures and training and experience with personal protection equipment
- (b) height and weight
- (c) vital signs: pulse, respiration, blood pressure, and, if indicated, temperature
- (d) dermatological system
- (e) ears, eyes, nose, mouth, throat
- (f) cardiovascular system
- (g) respiratory system
- (h) gastrointestinal system
- (i) genitourinary system
- (j) endocrine and metabolic systems
- (k) musculoskeletal system
- (l) neurological system
- (m) mental status evaluation. Based on the severity, diagnosis, and impairment of any identified behavior or condition, the initial examiner is encouraged to consider referral of the applicant to a doctoral level mental health professional for further evaluation. In general, the current or recent use of psychotropic medications shall be reviewed by a Board certified psychiatrist.
- (n) audiometry. Audiograms should be performed in an ANSI approved "soundproof" booth (ANSI S3.1-1977) with equipment calibrated to ANSI standards (ANSI S3.6-1973). If a booth is unavailable, the test room sound pressure levels should not exceed those specified in the Federal OSHA noise regulations (29 CFR 1910.25),

- (o) visual acuity and peripheral vision testing
- (p) pulmonary function testing. A baseline test should be administered by an experienced individual. Only a spirogram that is technically acceptable and demonstrates the best efforts by an individual should be used to calculate the Forced Vital Capacity (FVC) and Forced Expiratory Volume in one second (FEV1.0),
- (q) review of hepatitis B immunization status including hepatitis B surface antibody titer if immunized, offer of hepatitis B vaccine if not fully immunized or HbgAb titer less than 10 and documentation of declination if vaccination refused by examinee,
- (r) a Purified Protein Derivative (PPD) test for tuberculosis, based on individual departmental infection control plans, and,
- (s) other diagnostic testing where indicated.

(3) The medical evaluation process should also include:

- (a) a review of tetanus immunization status.

(4) All medical information collected as part of a medical evaluation shall be considered confidential medical information, and shall be released by the physician only with the specific written consent of the candidate. The physician shall report the results of the medical evaluation to the candidate, including any medical condition(s) disclosed during the medical evaluation, and the recommendation whether the candidate is medically certified to perform as a fire fighter. The physician shall inform the fire department only whether or not the candidate is medically certified to perform as a fire fighter. The specific written consent of the candidate shall be required to release confidential medical information to the fire department, following guidelines set forth under the Americans With Disabilities Act (ADA) and other relevant policies.

(5) Category A and Category B Medical Conditions:

- (a) A Category A Medical Condition is a medical condition that would preclude an individual from performing the essential job functions of a municipal fire fighter in a training or emergency operational environment, or present a significant risk to the safety and health of that individual or others.
- (b) A Category B Medical Condition is a medical condition that, based on its severity or degree, may or may not preclude an individual from performing the essential job functions of a municipal fire fighter in a training or emergency operational environment, or present a significant risk to the safety and health of that individual or others.

(6) ) The Commonwealth of Massachusetts Human Resource Division's (HRD) has adopted the National Fire Protection Association (NFPA) 1582, Standard on Medical Requirements for Firefighters as the medical standards for municipal firefighters

The current NFPA firefighter medical standards are attached hereto in Appendix B. All content shown within NFPA 1582 remains the property of the National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts, and shall not be reproduced without the written consent of the NFPA. By making the content of NFPA 1582 available for this document, the NFPA does not waive any rights in the copyright of NFPA 1582.

## **08 Physical Fitness Standards Test Course for Fire Fighters**

(1) General Description The Physical Fitness Standards Test for Fire Fighter consists of 7 events that require each candidate to perform simulations of activities that are part of the fire fighter's job. These events require cardiovascular fitness, muscle strength, muscular endurance and flexibility. Each event will be timed. During all events, the candidate will wear a weighted vest which approximates the weight of the clothing, equipment and breathing apparatus that a fire fighter normally wears during these types of activities. The events are described below. They will be performed in the order listed.

(a) Stair Climb This event simulates continuous stair climbing, an activity that fire fighters may perform when getting to a fire at an incident scene. For this event, the candidate will be required to step on a rotating staircase (also known as a stepmill) at a pre-determined stepping pace for a specific period of time. There is a five minute rest period after the stair climb event.

(b) Ladder Event This event simulates various activities related to using extension ladders. The candidate will be required to remove a ladder from a rack, carry it some distance, raise a weight of approximately 45 lbs. attached to a rope that simulates the raising of an extension ladder, lower that weight and return the ladder to the rack from which it was taken. The event ends when the ladder is back in the rack. This event will be timed.

(c) Hose Advance This event simulates the actions necessary to manipulate a fully charged fire hose. The candidate will be required to pull 50 feet of hose through a U-shaped course with several turns. There will be a ceiling on the U-shaped course to prevent the candidate from standing upright. This event will be timed.

(d) Forcible Entry This event simulates breaking down a door to gain entry to a burning structure or an incident scene. For this event the candidate will be required to strike a rubber pad mounted on a moveable post. The candidate will use a 12 lb. sledge hammer to move the post a set distance. The post and structure are weighted to simulate the force one would need to exert on a door in order to gain entrance. The candidate's score will be based on the time it takes to move the post the required distance.

(e) Search This event simulates the actions necessary to enter and search a smoke-filled structure. Candidates crawl through a dark wooden tunnel with obstructions and turns. The tunnel is approximately 65 feet long. The tunnel is 4 feet high and 4 feet wide. At one location in the tunnel there is an obstacle on the floor and at one location there is an obstacle from the ceiling. In addition, at two locations, the tunnel is reduced from 4 feet to 3 feet in width. This event will be timed.

(f) Rescue Through a Doorway This event simulates the actions necessary to drag an unconscious victim through a doorway to get the victim to safety. Individuals drag a 125 pound dummy approximately 60 feet along a zigzag course to a designated area at the end of the course. In this event, there is a low ceiling over the course to prevent candidates from standing upright. This event will be timed.

(g) Ceiling Hook (Pike Pole) This event simulates the use of a pike pole or ceiling hook. A pike pole or ceiling hook is a fire fighting tool used to tear down ceilings or open walls while looking for hidden fires. This event requires the candidate to take a pike pole, tipped with an industrial hammer head, and thrust it upward at a metal plate in an 8 foot ceiling. The metal plate weighs approximately 60 lbs. and must be lifted six inches in order for the strike to count. The candidate then steps over to the next part of the event, where a pike pole handle is suspended from a ceiling height. The pole is attached to a counter balance that weighs approximately 80 lbs. The candidate must pull the pole down six inches in order for the pull to count. The candidate must perform one push and five pulls in a sequence. The event will require the candidate to perform four one-minute periods of work, in which he/she will try to do as many push-pull sequences as possible. Only completed sequences will count in the scoring of this event. Each work period will be followed by a 30 second rest period.

(2) Specifications for these test events are on file at HRD.

**09 Scoring of the Physical Fitness Standards Test Course for Fire Fighters**

(1) The scoring will be as follows:

TABLE OF CUT SCORES	
Stepmill	200 secs
Ladder	35.56 secs
Hose Advance	20 secs
Forcible Entry	13.91 secs
Search	39 secs
Rescue	36 secs
Ceiling Hook	25 reps

(2) In order to pass the Physical Fitness Standards Test successfully, a candidate must pass every sub-test by achieving at least the passing score indicated on the above chart. If upon examination, a candidate does not pass the test, then that candidate will be required to retake the entire test (all the sub-tests) during the re-examination.

## **10 Medical Standards for Municipal Police Officers**

- (1) Medical Evaluation: Each municipal police department shall establish and implement a pre-placement medical evaluation process for candidates. During the medical evaluation, the physician shall evaluate each individual to ascertain the presence of any medical conditions listed in these standards, or any medical conditions not listed which would prevent the individual from performing the essential job functions without posing significant risk to the safety and health of him/herself or others. It is our intent to encourage the use of professional judgment regarding medical conditions that are not specifically listed.

The examining physician shall not certify as having met the medical requirements of these standards any candidate who is determined to have a Category A condition.

The examining physician shall not certify as having met the medical requirements of these standards any candidate who is determined to have a Category B condition that is of sufficient severity, either from the condition or the treatment, to prevent the candidate from performing the essential functions of a police officer without posing a significant risk to the safety and health of him/herself or others.

- (2) The medical evaluation shall minimally include the following:

- (a) a comprehensive medical history in addition to the medical history check-off list completed as Section E of the MA-HRD Medical Examination Form, to include significant past exposures, including, but not limited to, noise, blasts (concussive forces), indoor shooting range (lead), and any prior injuries, with particular attention to head injuries, any hospitalizations and surgeries and any medications used on a regular basis or repeatedly for any perceived medical condition (e.g.: over-the-counter allergy medications or over-the-counter pain medications).
- (b) height and weight;
- (c) vital signs: pulse, respiration, blood pressure, and, if indicated, temperature;
- (d) dermatological system;
- (e) ears, eyes, nose, mouth, throat;
- (f) cardiovascular system;
- (g) respiratory system;
- (h) gastrointestinal system;
- (i) genitourinary system;
- (j) endocrine and metabolic systems;
- (k) musculoskeletal system;
- (l) neurological system;
- (m) basic mental status evaluation to include, at a minimum, the following:
  - general appearance (e.g., kempt, disheveled),
  - affect,

- state of alertness,
- orientation to place, person and time,
- comprehensibility in expression,
- insight,
- coherence of thought processes.

The initial examiner is encouraged to refer any applicant found to have an apparent abnormality in mental status evaluation to a doctoral level mental health professional (psychologist or psychiatrist) for further evaluation. Current or recent use of psychotropic medications shall be reviewed by a board-certified psychiatrist. Candidates with current or past psychiatric diagnoses in the domains noted in Section IV.(6)(p) must be referred to a board-certified psychiatrist, preferably one with experience evaluating individuals for safety-sensitive job positions, for final determination of appropriateness to function as a police officer or fire fighter.

(n) audiometry;

Audiograms should be performed in a sound-treated booth compliant with the most recent version of ANSI S3.1 (Criteria for permissible ambient noise during audiometric testing) with equipment calibrated to the most recent version of ANSI standard S3.6 (Specification for Audiometers). If a booth is unavailable, the test room sound pressure levels should not exceed those specified in the Federal OSHA "Audiometric test rooms" standard (29 CFR 1910.95, Appendix D);

(o) visual acuity, color vision and peripheral vision testing;

(p) pulmonary function screening;

Screening pulmonary function evaluation shall consist of spirometry with no use of short acting bronchodilator agents for 8 hours prior to testing. Testing should be performed in accordance with the most recent version of the American Thoracic Society "Standardization of Lung Function Testing." Screening spirometry should be administered by an experienced individual both trained in the use of the spirometry instruments and experienced in performing the examinations;

(q) a review of hepatitis B immunization status;

(r) a Purified Protein Derivative (PPD) test or interferon-gamma release assay (IGRA) for tuberculosis; and

(s) other diagnostic testing where indicated.

(3) The medical evaluation process may also include:

a review of tetanus immunization status.

(4) Communication of Medical Evaluation Results

(a) Reporting of Medical Evaluation

The physician shall report the results of the medical evaluation to the candidate, including any medical condition(s) disclosed during the medical evaluation and the

recommendation whether or not the candidate passed the medical exam. The physician shall inform the police department and HRD only whether or not the candidate passed the medical exam.

(b) Confidentiality

All medical information collected as part of a medical evaluation shall be considered confidential medical information, and shall be released to the police department, HRD or any other requesting body by the physician only with the specific written consent of the candidate following guidelines set forth under the Americans with Disabilities Act (ADA) and the Healthcare Insurance Portability and Accountability Act (HIPAA) of 1996.

(5) Category A and Category B medical conditions

- (a) A Category A Medical Condition is a medical condition that would preclude an individual from safely and effectively performing the essential job functions of a municipal police officer.
- (b) A Category B Medical Condition is a medical condition that, based on its severity or degree, may or may not preclude an individual from safely and effectively performing the essential job functions of a municipal police officer.

(6) Biological systems to be evaluated and corresponding standards:

(a) Musculoskeletal

1. Head and Skull

a. Category A medical conditions shall include:

- i. uncorrected decompression craniectomy with residual defect larger than 1 square inch.

b. Category B medical conditions shall include:

- i. deformities of the skull, loss or congenital absence of the bony substance of the skull which limit the ability to wear a mask and/or protective breathing apparatus,
- ii. thoracic outlet syndrome sufficient to compromise required activity,
- iii. congenital cysts, chronic draining fistulas, or similar lesions,
- iv. any other head condition that would result in an individual not being able to safely and effectively perform the job of police officer.

2. Neck and Cervical Spine



a. Category A medical conditions shall include:

i. none

b. Category B medical conditions shall include:

i. cervical arthrodesis/fusion/instability,

ii. cervical canal stenosis,

iii. cervical radiculopathy or myelopathy,

iv. herniated disc,

v. degenerative disc disease,

vi. abnormal chronic contraction of neck muscles,

vii. decompression laminectomy,

viii. any other neck condition that would result in an individual not being able to safely and effectively perform the job of police officer.

3. Thoracic/lumbar/sacral Spine

a. Category A medical conditions shall include:

i. symptomatic spondylolisthesis, whether or not surgically corrected.

b. Category B medical conditions shall include:

i. lumbar laminectomy or discectomy, with or without fusion.

ii. degenerative disease/spondylolysis/pars defect,

iii. structural abnormality, fracture, or dislocation,

iv. degenerative disk disease,

v. herniated disk/sciatica/radiculopathy,

vi. spinal stenosis,

vii. spinal surgery not covered in Category A,

viii.any other spinal condition that would result in an individual not being able to safely and effectively perform the job of police officer.

4. Extremities

a. Category A medical conditions shall include:

- i. hemipelvectomy,
- ii. hip disarticulation,
- iii. above-the-knee amputation,
- iv. lack of either hand,
- v. lack of either thumb proximal to the nail cuticle.

b. Category B medical conditions shall include:

- i. severe limitation of motion of a joint, fibrosis, or arthrodesis,
- ii. amputations not covered in Category A:
  - a. whole or partial digit amputation other than the thumb,
  - b. amputation of multiple digits,
  - c. partial foot amputations including multiple toes on the same foot,
  - d. transtibial amputation,
  - e. any other amputation not covered in Category A.
- iii. total joint arthroplasty:
  - a. shoulder
  - b. elbow
  - c. wrist
  - d. thumb, first, or second digit
  - e. hip
  - f. knee
  - g. ankle
- iv. deformity or dislocation of a joint or limb,
- v. joint reconstruction, ligamentous instability, or joint replacement not covered in (iii),
- vi. chronic osteoarthritis or traumatic arthritis,

- vii. inflammatory arthritis,
- viii. osteomyelitis,
- ix. compressive neuropathies including carpal tunnel syndrome or ulnar nerve palsy,
- x. required use of stabilizing orthopedic braces,
- xi. any other extremity condition that would result in an individual not being able to safely and effectively perform the job of police officer.

(b) Eyes and Vision

The medical evaluation shall minimally include visual acuity (Snellen) and peripheral vision testing using a standardized testing device (Titmus or Optec Vision Screener or other similar vision screening device).

Contact lenses are not permitted to meet the uncorrected standard.

X-chrom contact lens use is not permitted to meet the color standard.

When the candidate is being tested, he/she must present without wearing contact lenses for at least several hours, so that uncorrected vision can be accurately tested.

1. Category A medical conditions shall include:

- a. uncorrected distance vision worse than 20/100 in either eye.
- b. corrected distant vision worse than 20/20 in the better eye UNLESS – the vision in the better eye alone is at least 20/25 AND the vision with both eyes together is 20/20 or better.
- c. Peripheral vision of less than 70 degrees temporally and 45 degrees nasally in either eye on screening examination AND/OR any history of conditions limiting field of vision will necessitate additional assessment by an eye care professional who will perform a formal detailed quantitative visual field assessment to determine if the binocular visual field is 140 degrees (at least 70 degrees temporally in each eye) above and below the meridian.
- d. Demonstration of color vision deficit on testing by Ishihara or Richmond pseudo-isochromatic plates.

Candidates who demonstrate a color deficiency with Ishihara or Richmond testing may be re-tested with a Farnsworth D-15. Two or more major “cross-over” errors (defined as a sequence jump of 4 or more in the cap sequence created by the test subject) on the Farnsworth D-15 is a Category A condition.

- e. Vision (refraction) corrective surgery that has not stabilized in terms of diopter changes documented at least 2 weeks apart or if there is residual glare, halos, starburst, monocular diplopia, continued use of

steroid drops, presence of haze on examination, microstriae, dryness affecting functional vision, active infection or loose epithelium.

2. Category B medical conditions shall include:

- a. diseases of the eye such as cataracts, retinal detachment, progressive retinopathy, glaucoma or optic neuritis, which, if present, and not severe enough to be disqualifying should be followed on a regular basis to ascertain continued adequate visual capability to safely perform essential police duties.
- b. any other ophthalmological surgical procedures, such as, but not limited to retinal detachment repair, periorbital muscle procedures.
- c. any other vision disorder or eye condition that would result in an individual not being able to safely and effectively perform the job of police officer.

(c) Ears and Hearing

The medical evaluation shall minimally include audiograms performed in a sound-treated booth compliant with the most recent version of ANSI S3.1 (Criteria for permissible ambient noise during audiometric testing) with equipment calibrated to the most recent version of ANSI standard S3.6 (Specification for Audiometers). If a booth is unavailable, the test room sound pressure levels should not exceed those specified in the Federal OSHA "Audiometric test rooms" standard (29 CFR 1910.95, Appendix D).

1. Category A medical conditions shall include:

Hearing deficit in pure tone thresholds in both ears, the deficit in each ear averaging 35 dB HL or worse at 500, 1000, 2000 and 3000 Hz,

Candidates failing the Category A pure tone threshold standard and who still wish to be considered for appointment will be required to have follow-up examinations that include:

full audiological examination, including speech reception threshold (SRT) and speech discrimination testing (NU-6 word lists) in both ears individually,

AND

full otological examination.

In order to pass they must demonstrate:

Pure tone thresholds in better ear indicating average hearing deficit at 500, 1000, 2000, and 3000 Hz to be lower than 35 dB HL,

AND

Performance score of 80% or better on the speech discrimination test in the better ear.

### **HEARING AIDS:**

Initial hearing examinations must take place unaided. Candidates who cannot pass the initial examination should be referred to a licensed audiologist for the follow-up examination. Candidates may use hearing aids for the follow-up examination. Candidates using hearing aids must pass the follow-up examination based on sound field-testing, using the criteria listed above.

2. Category B medical conditions shall include:

- a. perforated tympanum,
- b. auditory canal - atresia, severe stenosis, or tumor,
- c. severe external otitis,
- d. auricle - severe agenesis or traumatic deformity,
- e. mastoid - severe mastoiditis or surgical deformity,
- f. Meniere's disease, labyrinthitis or any disorder of equilibrium,
- g. otitis media,
- h. any other hearing disorder or ear condition that would result in an individual not being able to safely and effectively perform the job of police officer.

(d) Nose, Mouth and Throat

1. Category A medical conditions shall include:

- a. tracheostomy,
- b. aphonia,
- c. absent sense of smell,
- d. congenital or acquired deformities which interfere with wearing a gas mask.

2. Category B medical conditions shall include:

- a. congenital or acquired deformities not covered in Category A,
- b. defects of articulation that materially interfere with verbal communication,
- c. defects of rate (stuttering, stammering, or cluttering) that interfere with verbal communication,
- d. chronic severe rhinitis,
- e. any other nose, oropharynx, trachea, esophagus, or larynx condition that interferes with breathing or speech or otherwise results in an individual not being able to perform safely and effectively as a police officer or to communicate effectively.

(e) Respiratory

1. Category A medical conditions shall include:
  - a. current lung abscess or current empyema,
  - b. active untreated pulmonary tuberculosis,
  - c. current pneumothorax,
  - d. interstitial disease with abnormal exercise oxygen desaturation (<90%),
  - e. obstructive pulmonary disease, meeting the following criteria:
    - i. cough and low grade wheezing between exacerbations,
    - ii.  $FEV_1/FVC < 0.7$  AND  $FEV_1 < 50\%$  predicted at testing with spirometry performed as described in Section IV(2)(o)<sup>i</sup>,
    - iii. required use of short-acting bronchodilatory medications prior to exercise.
2. Category B medical conditions shall include:
  - a. lobectomy or pneumonectomy,
  - b. obstructive disease not meeting Category A criteria,
  - c. chronic bronchitis,
  - d. emphysema,
  - e. bronchiectasis,
  - f. history of bronchiectasis, bronchitis, fibrous pleuritis, fibrosis, cystic disease, tuberculosis, mycotic lung disease, or pneumothorax,
  - g. interstitial disease with normal exercise oxygen saturation,
  - h. any other respiratory condition that results in an individual not being able to safely and effectively perform the job of police officer.

(f) Cardiovascular

1. Cardiac
  - a. Category A medical conditions shall include:
    - i. current diagnosis of angina pectoris,
    - ii. current congestive heart failure,
    - iii. ventricular aneurysm,
    - iv. acute or chronic pericarditis, endocarditis, or myocarditis. Endocarditis with resultant significant valvular lesions, or myocarditis leading to myocardial insufficiency,
    - v. cardiac or multi-organ transplant, left ventricular assist device or other mechanical aide to circulation,

- vi. third degree AV block without cardiac pacemaker,
- vii. coronary artery disease, cardiac hypertrophy, or other cardiac condition without evidence of a functional capacity equal to or greater than 12 METs without evidence of ischemia,
- viii. recurrent syncope,
- ix. history of sudden cardiac death syndrome,
- x. hemodynamically significant valvular heart disease,
- xi. Non-rheumatic atrial fibrillation with CHADS 2 score  $\geq 2$  or CHA<sub>2</sub>DS<sub>2</sub>-VASc score  $\geq 1$  **not** taking anticoagulant medication. (for persons taking anticoagulant medication, see section IV.(1)1.(c) ),
- xii. automatic implantable cardioverter defibrillator (AICD).

b. Category B medical conditions shall include:

- i. coronary artery disease not covered in Category A,
- ii. significant arrhythmias (either hemodynamically significant or in representing an elevated risk of hemodynamically compromising rhythm alteration),
- iii. cardiac hypertrophy,
- iv. history of myocardial infarction, coronary artery bypass, coronary angioplasty, stent placement, or atherectomy,
- v. congenital abnormality,
- vi. cardiac pacemaker,
- vii. any other cardiac condition that results in an individual not being able to safely and effectively perform the job of police officer.

2. Vascular System

a. Category A medical conditions shall include:

- i. congenital or acquired lesions of the aorta and major vessels,
- ii. marked circulatory instability as indicated by orthostatic hypotension, persistent tachycardia, and severe peripheral vasomotor disturbances,
- iii. aneurysm of a major vessel, congenital or acquired,
- iv. untreated persistent hypertension (systolic blood pressure of 160 mmHg or greater or diastolic blood pressure of 100 mmHg or greater),
- v. current diagnosis of embolism or thrombophlebitis.

b. Category B medical conditions shall include:

- i. persistent hypertension controlled through medication (systolic blood pressure less than 160 mmHg and diastolic blood pressure less than 100 mmHg),

- ii. peripheral vascular disease, including intermittent claudication, Raynaud's disease, and Buerger's disease,
- iii. recurrent thrombophlebitis,
- iv. chronic lymphedema,
- v. severe or symptomatic varicose veins or venous insufficiency,
- vi. any other vascular condition that results in an individual not being able to safely and effectively perform the job of police officer.

(g) Gastrointestinal

1. Category A medical conditions shall include:
  - a. liver or multi-organ transplantation,
  - b. active gastrointestinal bleeding.
2. Category B medical conditions shall include:
  - a. cholecystitis,
  - b. gastritis,
  - c. chronic or acute hepatitis,
  - d. hernia,
  - e. inflammatory bowel disease,
  - f. intestinal obstruction,
  - g. pancreatitis,
  - h. bowel resection,
  - i. gastrointestinal ulcer,
  - j. cirrhosis,
  - k. diverticulitis,
  - l. any other gastrointestinal condition that results in an individual not being able to safely and effectively perform the job of police officer.

(h) Reproductive

1. Category A medical conditions shall include:
  - a. none.
2. Category B medical conditions shall include:
  - a. pregnancy, for its duration. Any candidate who is pregnant shall be evaluated based on the candidate's ability to perform as a police officer. Such evaluation shall be based in part on the timing of training and duties as related to pregnancy duration and postpartum recovery. Furthermore, a pregnant candidate shall be informed of the potential risks to her fetus in



the performance of essential job functions, due to possible exposures to hazardous materials and physical contact.

- b. any other reproductive condition that results in an individual not being able to safely and effectively perform the job of police officer.

(i) Genitourinary

1. Category A medical conditions shall include:

- a. renal disease requiring dialysis,
- b. renal or multi-organ transplantation.

2. Category B medical conditions shall include:

- a. any other renal, urinary, or genital condition that results in an individual not being able to safely and effectively perform the job of police officer.

(j) Neurological

1. Category A medical conditions shall include:

- a) ataxia,
- b) cerebrovascular disease with documented episodes of neurologic impairment such as cerebrovascular accidents ( CVAs) and transient ischemic attacks (TIAs),
- c) multiple sclerosis with activity or evidence of progression within previous three years,
- d) muscular dystrophy,
- e) myasthenia gravis,
- f) ALS,
- g) all epilepsy syndromes to include psychomotor, focal, petit mal, or grand mal seizures other than for those with all of the following:
  - i. no seizure for 1 year off all anti-epileptic medications or 5 years on a constant dose of the same medication,
  - ii. normal CT and epilepsy protocol MRI of the brain,
  - iii. normal neurological examination, and
  - iv. a definitive statement from a qualified neurologist specializing in seizure disorders (epileptologist) attesting to items i. through iii. above, and that the candidate is neurologically cleared for police academy training and the performance of a police officer's essential job functions.
- h) single first-time unprovoked seizure or unexplained episode of loss of consciousness less than 6 months prior to evaluation,

- i) choreoathetosis,
- j) dementia,
- k) any disorder affecting equilibrium which is acute, episodic, chronic, or recurrent.

2. Category B medical conditions shall include:

- a. congenital conditions and malformations,
- b. migraines,
- c. clinical disorders with paresis, paralysis, loss of coordination, abnormal motor function, or abnormalities of sensation,
- d. history of subdural, subarachnoid, or intracerebral hemorrhage,
- e. traumatic brain injury, concussion or multiple incidents of head trauma,
- f. any other neurological condition that results in an individual not being able to safely and effectively perform the job of police officer.

(k) Skin

1. Category A medical conditions shall include:

- a. none.

2. Category B medical conditions shall include:

- a. non-localized, i.e., widespread, skin disease,
- b. extensive skin grafts,
- c. contact allergies,
- d. any other dermatologic condition that results in an individual not being able to safely and effectively perform the job of police officer.

(l) Hematopoietic and Lymphatic

1. Category A medical conditions shall include:

- a. hemorrhagic states requiring replacement therapy, including hemophilia,
- b. sickle cell disease (homozygous),
- c. chronic anticoagulation therapy.

2. Category B medical conditions shall include:

- a. anemia, leukopenia, or thrombocytopenia,
- b. polycythemia vera,
- c. splenomegaly,
- d. history of thromboembolic disease,
- e. any other hematological condition that results in an individual not being able to safely and effectively perform the job of police officer.

(m) Endocrine and Metabolic

1. Category A medical conditions shall include:
  - a. uncontrolled diabetes mellitus,
  - b. insulin dependent diabetes not controlled by the use of a pump or basal/bolus technique,
  - c. insulin dependent diabetes not meeting criteria described in Appendix A.
2. Category B medical conditions shall include:
  - a. Diabetes mellitus,  
Note: Any patient with diabetes is required to provide medical information indicating that they meet the requirements described in Appendix A.
  - b. diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance,
  - c. nutritional deficiency disease or metabolic disorder,
  - d. any other endocrine or metabolic condition that results in an individual not being able to safely and effectively perform the job of police officer.

(n) Tumors and Malignant Disease

1. Category A medical conditions shall include:
  - a. none.
2. Category B medical conditions shall include:
  - a. malignant disease which is newly diagnosed, untreated, or currently being treated. The medical evaluation of any candidate with malignant disease which is newly diagnosed, untreated, or currently being treated shall be deferred until treatment has been completed. Treated malignant disease shall be evaluated based on that individual's current physical condition and on the likelihood of that individual's disease to recur or progress.
  - b. any other tumor or malignancy that results in an individual not being able to safely and effectively perform the job of police officer.

(o) Psychiatric

1. Category A medical conditions shall include current or past diagnoses of:
  - a. disorders of behavior,
  - b. anxiety disorders,
  - c. disorders of thought,
  - d. disorders of mood,
  - e. disorders of personality.
2. Category B medical conditions shall include:

- a. a history of any psychiatric condition, behavior disorder, or substance abuse problem not covered in Category A. Such history shall be evaluated based on that individual's history, current status, prognosis, and ability to respond to the stressors of the job,
- b. any other psychiatric condition that results in an individual not being able to safely and effectively perform the job of police officer.

(p) Conditions not otherwise covered

1. Category A medical conditions shall include:
  - a. none.
2. Category B medical conditions shall include:
  - a. connective tissue and autoimmune diseases, including dermatomyositis, lupus erythematosus, scleroderma, and rheumatoid arthritis,
  - b. history of heat stroke, frostbite, or other thermal injury,
  - c. potentially transmissible infectious disease,
  - d. sleep disorders such as obstructive sleep apnea, central sleep apnea and narcolepsy,
  - e. multi-system degenerative disorders,
  - f. any other systemic condition that results in an individual not being able to safely and effectively perform the job of police officer.

(q) Chemicals, Drugs and Medications

1. Category A medical conditions shall include:
  - a. active alcoholism or substance abuse.
2. Category B medical conditions shall include the regular use of various chemicals and drugs, including -- but not limited to -- the following categories:
  - a. cardiovascular agents,
  - b. narcotics,
  - c. sedative-hypnotics,
  - d. stimulants,
  - e. psychoactive agents,
  - f. systemic steroids,
  - g. any other chemical, drug, or medication that results in an individual not being able to safely and effectively perform the job of police officer.

## 11 Physical Fitness Standards Test Course for Police Officers

- (1) The Physical Fitness Standards Test for Police Officer consists of four (4) events that require candidates to perform simulations of activities that are a part of the police officer's job. These events require cardiovascular fitness, muscle strength, muscular endurance and flexibility. Each event will be timed. During all events, the candidate will wear a duty belt equipped with a holster, plastic gun and night stick to simulate the equipment a police officer normally wears during these types of activities. The events are described below. They will be performed in the order listed. There will be a twenty second rest period between events.
- (a) Event #1: "Getting to a Problem" - The Obstacle Course.  
This event simulates the actions necessary to pursue and "takedown" a suspect. The event begins with a 340-yard obstacle course where the candidate will be faced with climbing under an obstacle, climbing up and down steps, going through an open window, climbing over a wall and negotiating a series of cones arranged in a zigzag pattern. At the end of the course, the candidate will be required to grab hold of a weighted bag attached to a pulley and touch it to the ground beyond a three (3) foot line. The candidate will then immediately move around the Power Station to the handcuffing simulation where he/she will be required to pull on two hand levers until the cable hits the stop. This completes the event.
- (b) Event #2 "Resolving the Problem" - The Trigger Pull Event.  
The event consists of raising a handgun and squeezing the trigger six (6) times with each hand.
- (c) Event #3: "Resolving the Problem" - The Separation Event.  
This event simulates tasks that require separating one party from another and controlling individuals, such as in crowd control situations. The candidate will be required to pull a hanging bag, weighted against 75 lbs., backwards touching it to the ground across a marked line. Each candidate will have to perform two "pulls".
- (d) Event #4 "Removing the Problem" - The Dummy Drag.  
This event simulates dragging a victim or suspect. The candidate will be required to drag a 6', 145 pound dummy over a straight 25 foot course.
- (2) Specifications for these test events are on file at HRD.

**12 Scoring of the Physical Fitness Standards Test Course for Police Officers**

(1) The scoring will be as follows:

TABLE OF CUT SCORES	
Obstacle Course	130.4 secs
Trigger Pull	7.1 secs
Bag Pull	14.2 secs
Dummy Drag	11 secs

(2) In order to pass the Physical Fitness Standards Test successfully, a candidate must pass every sub-test by achieving at least the passing score indicated on the preceding chart. If upon examination, a candidate does not pass the test, then that candidate will be required to retake the entire test (all the sub-tests) during the re-examination.

# **Appendix A: Diabetes Mellitus**

## Diabetes Mellitus

A candidate with Diabetes Mellitus (diabetes) must comply with the requirements described below. At their own expense, the candidate or officer must submit medical information from their treating medical provider responsive to these criteria, including actual medical data which can be reviewed by the Police Physician. These criteria apply to all cases of diabetes, independent of whether insulin is required or not. The requirements pertaining explicitly to insulin do not apply to individuals whose diabetes is being managed without insulin.

The medical information must cover the following:

1. Care: The individual is under the care of an endocrinologist or other physician knowledgeable about diabetes management. Outpatient and in-patient medical record(s) of the last three years or since date of diagnosis (whichever is shorter) should be reviewed by the treating physician and provided to the Police Physician.

2. Treatment: The method of treatment of diabetes

A. If the individual has type 1 diabetes, the individual has been on a basal/bolus regimen or an insulin pump using analogue insulins for the six (6) months prior to evaluation.

If the individual uses an insulin pump, documentation is needed as follows:

1. proper understanding and education in the use of the insulin pump
2. start date for the use of the pump
3. history of insulin site infections
4. history of pump cessation and pump malfunction
5. backup plan for pump malfunction including use of injectable insulin
6. frequency of infusion set changes

B. If has type 2 diabetes on insulin, the individual has been on a stable medication regimen for the three (3) months prior to evaluation.

C. If on oral agents alone, the individual has been on a stable medication regimen for the month prior to evaluation.

3. Education: The individual has been educated in diabetes and its management and thoroughly informed of and understands the procedures that must be followed to monitor and manage his/her diabetes and what procedures should be followed if complications arise.

4. Quantitative Glucose Monitoring



- A. The individual has documentation of ongoing self-monitoring of blood glucose.
- B. This must be done with a glucose meter that stores every reading, records date and time of reading and from which data can be downloaded.
- C. Monitoring logs must be available covering the time period (1, 3 or 6 months) described in sections 2.A. – C. The frequency of glucose monitoring must follow a schedule acceptable to the Police Physician in consultation with the treating physician.
- D. Has had hemoglobin A1C measured at least four times a year (intervals of two to three months) over the last 12 months prior to evaluation if diagnosis has been present over a year. If hemoglobin A1C > 8%, this may signal a problem with diabetes management that warrants further assessment.

5. Incapacitating events

- A. Has not had any episodes within the past one (1) year,  
**and**
- B. no more than two (2) episodes in the past three (3) years,  
**or**
- C. since diagnosis of diabetes (if less than one year) has not had any episodes of:
  - 1. severe hypoglycemia (loss of consciousness, seizures or coma, requiring the assistance of others or needing urgent treatment [glucagon injection/IV glucose]) or
  - 2. blood sugar < 60 mg/dl with unawareness demonstrated in current glucose logs.

6. Chronic complication screening: Chronic complications of diabetes are associated with increased risk for severe hypoglycemic episodes and warrant further assessment. The components of screening for chronic complications are:

- A. complete eye exam by a qualified ophthalmologist or optometrist, including a dilated retinal exam, demonstrating no more than mild background diabetic retinopathy.
- B. Normal vibratory testing with a 128 Hz tuning fork, has normal testing with 10 gram Semmes-Weinstein monofilament and normal orthostatic blood pressure and pulse testing.
- C. Normal cardiac physical exam. Cardiac stress testing to at least 12 METS is recommended and should begin based on either the criteria of the American Heart

Association / American College of Cardiology or those of the American Diabetes Association. Individuals with diabetes who have a normal cardiac stress test will be retested every one to three years based on individual clinical assessment. This assessment should consider:

- the age of the individual
- the number and persistence of CAD risk factors
- the severity of CAD risk factors

D. Microalbumin/creatinine ratio <30:1, measured or calculated creatinine clearance > 60 ml/min.

7. Ongoing evaluation and requirements:

- A. Should have medical records and glucose meter logs reviewed periodically. Because of the nature of diabetes it is important that regular medical follow up be provided to the individual. The frequency and content of the evaluation should be determined on an individual basis by the Police Physician in consultation with the treating physician.
- B. Must advise Police Physician of any change in type of medication.
- C. Must advise Police Physician of any episodes of significant hypoglycemia or hyperglycemia (ketoacidosis, hyperosmolar hyperglycemic nonketotic state).
- D. Must provide documentation of ongoing evaluation of cardiac, ophthalmological, neurological and/or renal status. [see sections above]

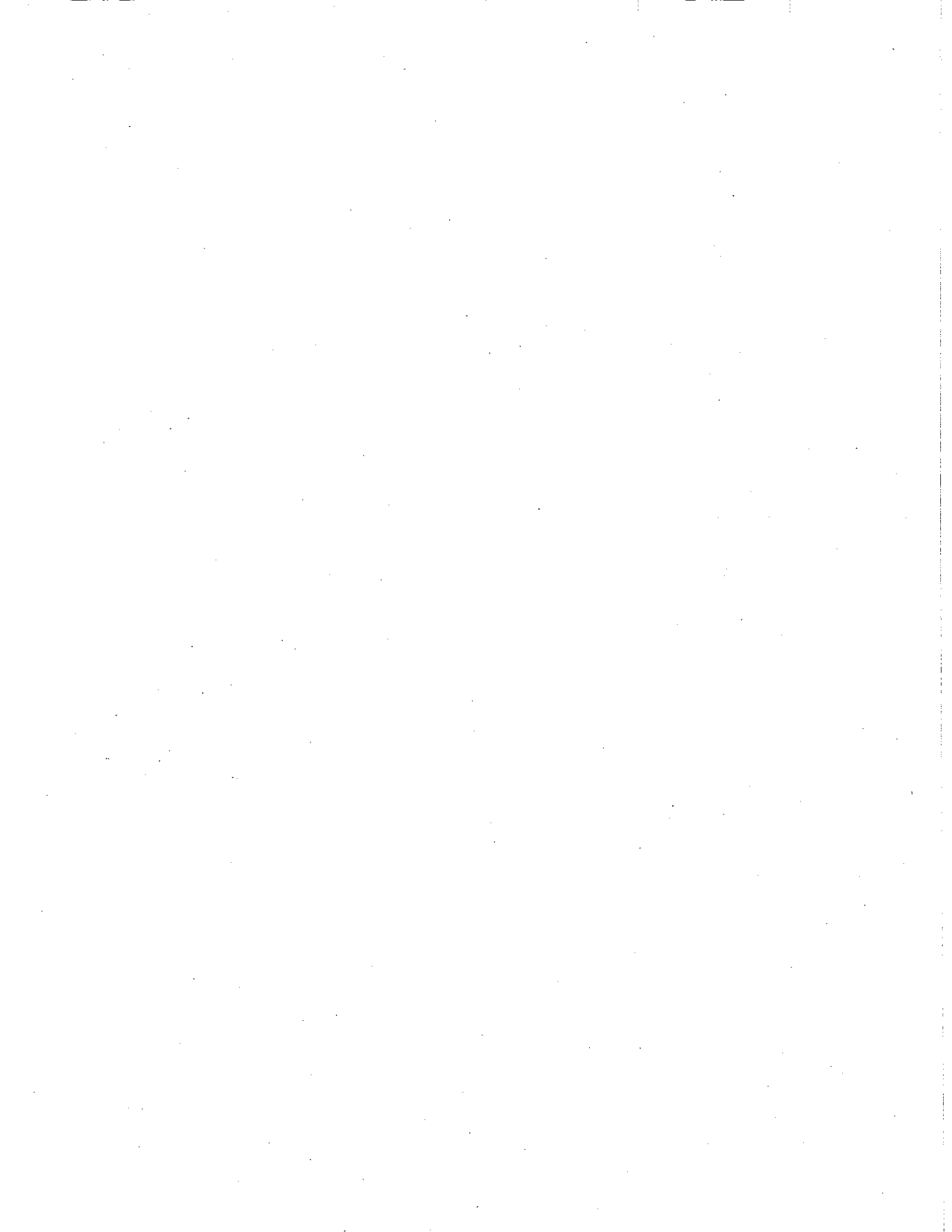
The diabetes requirements above are adopted from the National Consensus Guideline for the Medical Evaluation of Law Enforcement Officers (2007), issued by the American College of Occupational and Environmental Medicine in consultation with the American Diabetes Association. The full document (soon to be available from ACOEM.org) should be consulted for additional details regarding recommended evaluation and monitoring. [www.acoem.org](http://www.acoem.org).

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<sup>1</sup> Vestbo J, Hurd SS, Agustí AG, *et al.* Global Strategy for the Diagnosis, Management and Prevention of Chronic Obstructive Pulmonary Disease, GOLD Executive Summary. *Am J Respir Crit Care Med.* 2012.

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**Appendix B:**  
Chapter 6 Medical Evaluations  
of Candidates



- (6) While wearing personal protective ensembles and SCBA, searching, finding, and rescue-dragging or carrying victims ranging from newborns to adults weighing over 200 lb (90 kg) to safety despite hazardous conditions and low visibility
- (7) While wearing personal protective ensembles and SCBA, advancing water-filled hoses up to 2½ in. (63 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) While wearing personal protective ensembles and SCBA, climbing ladders, operating from heights, walking or crawling in the dark along narrow and uneven surfaces that might be wet or icy, and operating in proximity to electrical power lines 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 hoses 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

**5.1.2** The fire department physician shall consider the physical, physiological, intellectual, and psychological demands of the occupation when evaluating the candidate's or member's ability to perform the essential job tasks.

**5.1.3** Medical requirements for candidates and members shall be correlated with the essential job tasks as determined by 5.1.1.

**5.1.4** The fire department shall provide the fire department physician with the list of essential job tasks to be used in the medical evaluation of members and candidates.

## 5.2 Essential Job Tasks for Specialized Teams.

**5.2.1** If the fire department operates specialized teams such as hazardous materials units, self-contained underwater breathing apparatus (SCUBA) teams, technical rescue teams, emergency medical services (EMS) teams, or units supporting tactical law enforcement operations, the fire department shall identify for each team its essential job tasks and specialized personal protective equipment (PPE) not specified in 5.1.1(1) through 5.1.1(13) that would apply to the members of that team.

**5.2.2** The fire department shall provide the fire department physician with the list of essential job tasks and specialized PPE specific to each specialized team.

**5.2.3** When performing the medical evaluation of members of a specialized team, the fire department physician shall consider the following:

- (1) Additional medical and/or physical requirements that are related to the job tasks being performed by the team that are not enumerated in this standard
- (2) The impact on members of having to wear or utilize specialized PPE that can increase weight, environmental isolation, sensory deprivation, and/or dehydration potential above levels experienced with standard fire suppression PPE

## Chapter 6 Medical Evaluations of Candidates

**6.1 Medical Evaluation.** A medical evaluation of a candidate shall be conducted prior to the candidate being placed in training programs or fire department emergency response activities.

**6.1.1\*** The medical evaluation of a candidate shall include a medical history, examination, and any laboratory tests required to detect physical or medical condition(s) that could adversely affect his/her ability to safely perform the essential job tasks outlined in 5.1.1.

**6.1.2\*** This standard shall provide specific requirements for candidates based on medical conditions that can affect a candidate's ability to safely perform the essential job tasks of a fire fighter.

### 6.2 Medical Conditions Affecting Ability to Safely Perform Essential Job Tasks.

**6.2.1** Medical conditions that can affect a candidate's ability to safely perform essential job tasks shall be designated either Category A or Category B.

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

**6.2.3** Candidates with Category B medical conditions shall be certified as meeting the medical requirements of this standard only if they can perform the essential job tasks without posing a significant safety and health risk to themselves, members, or civilians.

### 6.3 Head and Neck.

#### 6.3.1 Head.

**6.3.1.1** Category A medical conditions shall include the following:

- (1) Defect of skull preventing helmet use or leaving underlying brain unprotected from trauma
- (2) Any skull or facial deformity that would not allow for a successful fit test for respirators used by that department
- (3) Any head condition that results in the candidate not being able to safely perform one or more of the essential job tasks

**6.3.1.2** Category B medical conditions shall include the following:

- (1)\*Deformities of the skull such as depressions or exostoses
- (2)\*Deformities of the skull associated with evidence of disease of the brain, spinal cord, or peripheral nerves
- (3)\*Loss or congenital absence of the bony substance of the skull

### 6.3.2 Neck.

**6.3.2.1** Category A medical conditions shall include any neck condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

**6.3.2.2** Category B medical conditions shall include the following:

- (1)\*Thoracic outlet syndrome
- (2)\*Congenital cysts, chronic draining fistulas, or similar lesions
- (3)\*Contraction of neck muscles

### 6.4 Eyes and Vision.

**6.4.1** Category A medical conditions shall include the following:

- (1)\*Far visual acuity less than 20/40 binocular, corrected with contact lenses or spectacles, or far visual acuity less than 20/100 binocular for wearers of hard contacts or spectacles, uncorrected
- (2)\*Color perception — monochromatic vision resulting in inability to use imaging devices such as thermal imaging cameras
- (5)\*Monocular vision
- (4) Any eye condition that results in the candidate not being able to safely perform one or more of the essential job tasks

**6.4.2** Category B medical conditions shall include the following:

- (1)\*Diseases of the eye such as retinal detachment, progressive retinopathy, or optic neuritis
- (2)\*Ophthalmological procedures such as radial keratotomy, Lasik procedure, or repair of retinal detachment
- (3) Peripheral vision in the horizontal meridian of less than 110 degrees in the better eye or any condition that significantly affects peripheral vision in both eyes

### 6.5\* Ears and Hearing.

**6.5.1** Category A medical conditions shall include the following:

- (1) Chronic vertigo or impaired balance as demonstrated by the inability to tandem gait walk
- (2) On audiometric testing, average hearing loss in the unaided better ear greater than 40 decibels (dB) at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz when the audiometric device is calibrated to ANSI Z24.5, *Audiometric Device Testing*
- (3) Any ear condition (or hearing impairment) that results in the candidate not being able to safely perform one or more of the essential job tasks
- (4)\*Hearing aid or cochlear implant

**6.5.2** Category B medical conditions shall include the following:

- (1)\*Unequal hearing loss
- (2) Average uncorrected hearing deficit at the test frequencies 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz greater than 40 dB in either ear
- (3) Atresia, stenosis, or tumor of the auditory canal
- (4)\*External otitis, recurrent
- (5)\*Agenesis or traumatic deformity of the auricle
- (6)\*Mastoiditis or surgical deformity of the mastoid
- (7)\*Ménière's syndrome, labyrinthitis, or tinnitus
- (8)\*Otitis media, recurrent
- (9) Surgical procedures to correct or improve hearing or other conditions of the ear

### 6.6 Dental.

**6.6.1** Category A medical conditions shall include any dental condition that results in inability to safely perform one or more of the essential job tasks.

**6.6.2** Category B medical conditions shall include the following:

- (1)\*Diseases of the jaws or associated tissues
- (2)\*Orthodontic appliances
- (3)\*Oral tissues, extensive loss
- (4)\*Relationship between the mandible and maxilla that interferes with satisfactory postorthodontic replacement or ability to use protective equipment

### 6.7 Nose, Oropharynx, Trachea, Esophagus, and Larynx.

**6.7.1** Category A medical conditions shall include the following:

- (1)\*Tracheostomy
- (2)\*Aphonia
- (3) 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 such as N-95 for medical response, P-100 for particulates and certain vapors, and SCBA for fire and hazmat operations

**6.7.2** Category B medical conditions shall include the following:

- (1)\*Congenital or acquired deformity
- (2)\*Allergic rhinitis
- (3) Epistaxis, recurrent
- (4)\*Sinusitis, recurrent
- (5)\*Dysphonia
- (6) Anosmia
- (7) Tracheal stenosis
- (8) Nasopharyngeal polyposis
- (9)\*Obstructive apnea (e.g., sleep apnea) if unresponsive to treatment

### 6.8 Lungs and Chest Wall.

**6.8.1** Category A medical conditions shall include the following:

- (1) Active hemoptysis
- (2) Current empyema
- (3) Pulmonary hypertension
- (4) Active tuberculosis
- (5)\*A forced vital capacity (FVC) or forced expiratory volume in 1 second (FEV<sub>1</sub>) less than 70 percent predicted even independent of disease
- (6)\*Obstructive lung diseases (e.g., emphysema, chronic bronchitis, asthma) with an absolute FEV<sub>1</sub>/FVC less than 0.70 and with either the FEV<sub>1</sub> below normal or both the FEV<sub>1</sub> and the FVC below normal (less than 0.80) (see references in R.2)
- (7)\*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)
- (8)\*Asthma — reactive airways disease requiring bronchodilator or corticosteroid therapy for 2 or more consecutive months in the previous 2 years, unless the candidate can meet the requirement in 6.8.1.1
- (9) Any pulmonary condition that results in the candidate not being able to safely perform one or more of the essential job tasks
- (10) Lung transplant

**6.8.1.1\*** A candidate who has in the past required bronchodilator, corticosteroid, or anti-inflammatory therapy (e.g., leukotriene receptor antagonists, such as Montelukast) for asthma but who does not believe he/she has asthma 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:

- (1) Asthma has resolved without symptoms off medications for 2 years.
- (2) Allergen avoidance or desensitization has been successful.
- (3) Spirometry demonstrates adequate reserve (FVC and FEV<sub>1</sub> greater than or equal to 90 percent) and no bronchodilator response measured off all bronchodilators on the day of testing.
- (4) Normal or negative response to provocative challenge testing [e.g., cold air, exercise (12 METs), methacholine, histamine, mannitol, or hypertonic saline] or negative response to exercise challenge.

**6.8.1.1.1** 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.

**6.8.2** Category B medical conditions shall include the following:

- (1)\*Pulmonary resectional surgery, chest wall surgery, and pneumothorax
- (2) Pleural effusion
- (3)\*Fibrothorax, chest wall deformity, and diaphragm abnormalities
- (4)\*Interstitial lung diseases
- (5)\*Pulmonary vascular diseases or history of pulmonary embolism
- (6)\*Bronchiectasis, if abnormal pulmonary function or recurrent infections
- (7) Infectious diseases of the lung or pleural space
- (8) Cystic fibrosis
- (9) Central or obstructive apnea (e.g., sleep apnea) if unresponsive to treatment

### 6.9 Aerobic Capacity.

**6.9.1\*** Category A medical conditions shall include an aerobic capacity less than 12 metabolic equivalents (METs) (12 METs = 42 mL O<sub>2</sub>/kg/min).

### 6.10 Heart and Vascular System.

#### 6.10.1 Heart.

**6.10.1.1** Category A medical conditions shall include the following:

- (1)\*Coronary artery disease, including history of myocardial infarction, angina pectoris, coronary artery bypass surgery, coronary angioplasty, and similar procedures
- (2)\*Cardiomyopathy or congestive heart failure, including signs or symptoms of compromised left or right ventricular function or rhythm, including dyspnea, S3 gallop, peripheral edema, enlarged ventricle, abnormal ejection fraction, and/or inability to increase cardiac output with exercise
- (3)\*Acute pericarditis, endocarditis, or myocarditis
- (4)\*Syncope, recurrent
- (5)\*A medical condition requiring an automatic implantable cardiac defibrillator or history of ventricular tachycardia or ventricular fibrillation due to ischemic or valvular heart disease, or cardiomyopathy
- (6) Third-degree atrioventricular block
- (7)\*Cardiac pacemaker

- (8) Hypertrophic cardiomyopathy, including idiopathic hypertrophic subaortic stenosis
- (9) Any cardiac condition that results in the candidate not being able to safely perform one or more of the essential job tasks
- (10) Heart transplant

**6.10.1.2** Category B medical conditions shall include the following:

- (1)\*Valvular lesions of the heart, including prosthetic valves
- (2)\*Recurrent supraventricular or atrial tachycardia, flutter, or fibrillation
- (3)\*Left bundle branch block
- (4) Second-degree atrioventricular block in the absence of structural heart disease
- (5) Sinus pause more than 3 seconds
- (6)\*Ventricular arrhythmia (history or presence of multifocal PVCs or nonsustained ventricular tachycardia on resting EKG with or without symptoms; history or presence of sustained ventricular tachycardia with or without symptoms)
- (7)\*Cardiac hypertrophy or hypertrophic cardiomyopathy
- (8)\*History of a congenital abnormality
- (9)\*Chronic pericarditis, endocarditis, or myocarditis

#### 6.10.2 Vascular System.

**6.10.2.1** Category A medical conditions shall include the following:

- (1) Hypertension
  - (a)\*Uncontrolled or poorly controlled hypertension
  - (b)\*Hypertension with evidence of end organ damage
- (2)\*Thoracic or abdominal aortic aneurysm
- (3) Carotid artery stenosis or obstruction resulting in greater than or equal to 50 percent reduction in blood flow
- (4)\*Peripheral vascular disease resulting in symptomatic claudication
- (5) Any other vascular condition that results in inability to safely perform one or more of the essential job tasks

**6.10.2.2** Category B medical conditions shall include the following:

- (1) Vasospastic phenomena such as Raynaud's phenomenon
- (2)\*Thrombophlebitis, thrombosis, or varicosities
- (3)\*Chronic lymphedema due to lymphadenopathy or venous valvular incompetency
- (4)\*Congenital or acquired lesions of the aorta or major vessels
- (5)\*Circulatory instability as indicated by orthostatic hypotension, persistent tachycardia, and peripheral vasomotor disturbances
- (6) History of surgical repair of aneurysm of the heart or major vessel

#### 6.11 Abdominal Organs and Gastrointestinal System.

**6.11.1** Category A medical conditions shall include the following:

- (1) Presence of uncorrected inguinal/femoral hernia regardless of symptoms
- (2) Any gastrointestinal condition that results in the candidate not being able to safely perform one or more of the essential job tasks

**6.11.2** Category B medical conditions shall include the following:



- (1)\*Cholecystitis
- (2)\*Gastritis
- (3)\*GI bleeding
- (4)\*Acute hepatitis
- (5) Hernia including the following:
  - (a) Uncorrected umbilical, ventral, or incisional hernia if significant risk exists for infection or strangulation
  - (b) Significant symptomatic hiatal hernia if associated with asthma, recurrent pneumonia, chronic pain, or chronic ulcers
  - (c)\*Surgically corrected hernia more than 3 months after surgical correction
- (6)\*Inflammatory bowel disease or irritable bowel syndrome
- (7)\*Intestinal obstruction
- (8)\*Pancreatitis
- (9) Diverticulitis
- (10)\*History of gastrointestinal surgery
- (11)\*Peptic or duodenal ulcer or Zollinger-Ellison syndrome
- (12)\*Asplenia
- (13)\*Cirrhosis, hepatic or biliary
- (14)\*Chronic active hepatitis

#### 6.12 Metabolic Syndrome.

6.12.1\* Category A medical conditions shall include metabolic syndrome with aerobic capacity less than 12 METs.

6.12.2 Category B medical conditions shall include metabolic syndrome with aerobic capacity 12 METs or greater.

#### 6.13 Reproductive System. See B.1.2.1.

6.13.1 Category A medical conditions shall include any genital condition that results in inability to safely perform one or more of the essential job tasks.

6.13.2 Category B medical conditions shall include the following:

- (1)\*Pregnancy, for its duration
- (2) Dysmenorrhea
- (3) Endometriosis, ovarian cysts, or other gynecologic conditions
- (4) Testicular or epididymal mass

#### 6.14 Urinary System.

6.14.1 Category A medical conditions shall include the following:

- (1) Renal failure or insufficiency requiring continuous ambulatory peritoneal dialysis (CAPD) or hemodialysis
- (2) Any urinary condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.14.2 Category B medical conditions shall include the following:

- (1) Diseases of the kidney
- (2) Diseases of the ureter, bladder, or prostate

#### 6.15 Spine and Axial Skeleton.

6.15.1 Category A medical conditions shall include the following:

- (1) Scoliosis of thoracic or lumbar spine with angle greater than or equal to 40 degrees
- (2) History of spinal surgery with rods that are still in place

- (3) Any spinal or skeletal condition producing sensory or motor deficit(s) or pain due to radiculopathy or nerve root compression
- (4) Any spinal or skeletal condition causing pain that frequently or recurrently requires narcotic analgesic medication
- (5) Cervical vertebral fractures with multiple vertebral body compression greater than 25 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (partial, moderate, severe), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery
- (6) Thoracic vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (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
- (7) Lumbosacral vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (partial, moderate, severe), fragmentation, abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery
- (8) Any spinal or skeletal condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.15.2 Category B medical conditions shall include the following:

- (1) Congenital or developmental malformations of the back, particularly those that can cause instability, neurological deficits, pain, or limit flexibility
- (2) Scoliosis with angle less than 40 degrees
- (3) Arthritis of the cervical, thoracic, or lumbosacral spine
- (4) Facet atrophism, high lumbosacral angle, hyperlordosis, Schmorl's nodes, Scheuermann's disease, spina bifida occulta, spondylolisthesis, spondylolysis, or transitional vertebrae
- (5) History of infections or infarcts in the spinal cord, epidural space, vertebrae, or axial skeletal joints
- (6) History of diskectomy or laminectomy or vertebral fractures
- (7) History of spine fusion that results in instability, reduced mobility, strength, or range of motion; or persistent pain.

#### 6.16 Extremities.

6.16.1 Category A medical conditions shall include the following:

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





- (3) Amputation of either thumb proximal to the mid-proximal phalanx
- (4) 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 structural firefighting 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 or 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 modification of the protocol
- (5) Chronic nonhealing or recent bone grafts
- (6) 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
- (7) Any extremity condition that results in the candidate not being able to safely perform one or more of the essential job tasks

**6.16.2** Category B medical conditions shall include the following:

- \*History of shoulder dislocation with surgical repair
- Significant limitation of function of shoulder, elbow, wrist, hand, or finger due to weakness, reduced range of motion, atrophy, unequal length, absence, or partial amputation
- Significant lack of full function of hip, knee, ankle, foot, or toes due to weakness, reduced range of motion, atrophy, unequal length, absence, or partial amputation
- \*History of meniscectomy or ligamentous repair of knee
- \*History of intra-articular malunion, or nonunion of upper or lower extremity fracture
- \*History of osteomyelitis, septic, or rheumatoid arthritis
- Bone hardware such as metal plates or rods supporting bone during healing

### 6.17 Neurological Disorders.

**6.17.1** Category A medical conditions shall include the following:

- 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 previous 3 years
- \*Myasthenia gravis with activity or evidence of progression within previous 3 years
- Progressive muscular dystrophy or atrophy
- Uncorrected cerebral aneurysm
- All single unprovoked seizures and epileptic conditions, including simple partial, complex partial, generalized, and psychomotor seizure disorders other than as allowed in 6.17.1.1
- Dementia (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)
- Any neurological condition that results in the candidate not being able to safely perform one or more of the essential job tasks

**6.17.1.1** To be medically qualified a candidate shall meet all of the following:

- No seizures for 1 year off all anti-epileptic medication or 5 years seizure free on a stable medical regimen
- Neurologic examination is normal
- Imaging (CAT or MRI scan) studies are normal
- Awake and asleep EEG studies with phobic stimulation and hyperventilation are normal
- A definitive statement from a qualified neurological specialist that the candidate meets the criteria specified in 6.17.1.1(1) through 6.17.1.1(4) and that the candidate is neurologically cleared for fire-fighting training and the performance of a fire fighter's essential job tasks

**6.17.2** Category B medical conditions shall include the following:

- Congenital malformations
- \*Migraine
- Clinical disorders with paresis, dyscoordination, deformity, abnormal motor activity, abnormality of sensation, or complaint of pain
- History of subarachnoid or intraparenchymal hemorrhage
- Abnormalities from recent head injury such as severe cerebral contusion or concussion

### 6.18 Skin.

**6.18.1** Category A medical conditions shall include the following:

- 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

**6.18.2** Category B medical conditions shall include the following:

- \*Skin conditions of a chronic or recurrent nature (eczema, cystic acne, psoriasis) that cause skin openings or inflammation or irritation of the skin surface



- (2)\*Surgery or skin grafting
- (3)\*Mycosis fungoides
- (4)\*Cutaneous lupus erythematosus
- (5)\*Raynaud's phenomenon
- (6)\*Scleroderma (skin)
- (7)\*Vasculitic skin lesions
- (8)\*Atopic dermatitis/eczema
- (9)\*Contact or seborrheic dermatitis
- (10)\*Stasis dermatitis
- (11)\*Albinism, Darier's disease, ichthyosis, Marfan syndrome, neurofibromatosis, and other genetic conditions
- (12)\*Folliculitis, pseudo-folliculitis, miliaria, keloid folliculitis
- (13)\*Hidradenitis suppurativa, furuncles, carbuncles, or Grade IV acne (cystic)
- (14)\*Mechano-bullous disorders (epidermolysis bullosa, Hailey pemphigus, porphyria, pemphigoid)
- (15)\*Urticaria or angioedema

#### 6.19 Blood and Blood-Forming Organs.

6.19.1 Category A medical conditions shall include the following:

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

6.19.2 Category B medical conditions shall include the following:

- (1) Anemia
- (2) Leukopenia
- (3) Polycythemia vera
- (4) Splenomegaly
- (5) History of thromboembolic disease
- (6) Any other hematological condition that results in inability to safely perform essential job tasks

#### 6.20 Endocrine and Metabolic Disorders.

6.20.1 Category A medical conditions shall include the following:

- (1)\*Type 1 diabetes mellitus, unless a candidate meets all of the following criteria:
  - (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 fire fighting.
  - (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 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 for-

mula. 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.)

- (c) 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.)
- (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 fire fighting as described in 5.1.1, allowing the fire department physician to determine whether the candidate meets the following criteria:
  - i. Is being successfully maintained on a regimen consistent with 6.20.1 (1) (a) and 6.20.1 (1) (b).
  - ii. 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.
  - iii. Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
  - iv.\*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.
  - v. Is certified not to have a medical contraindication to fire-fighting training and operations.
- (2) Insulin-requiring Type 2 diabetes mellitus, unless a candidate meets all of the following criteria:
  - (a) Is maintained by a physician knowledgeable in current management of diabetes mellitus.
  - (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 fire fighting.
  - (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 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.)

- (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 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.)
- (f) Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METS) 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 fire fighting as described in 5.1.1, allowing the fire department physician to determine whether the candidate meets the following criteria:
  - i. 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.
  - ii. 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.
  - iii. Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
  - iv. 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
  - v. Is certified not to have a medical contraindication to fire-fighting training and operations.

- (3) Any endocrine or metabolic condition that results in the candidate not being able to safely perform one or more of the essential job tasks

**6.20.2** Category B medical conditions shall include the following:

- (1)\*Diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance
- (2) Nutritional deficiency diseases or other metabolic disorder
- (3) Diabetes mellitus, not on insulin therapy, but controlled by diet, exercise, and/or oral hypoglycemic agents unless all of the following are met:

- (a) 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.
- (b) If on oral hypoglycemic agents, has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding year.
- (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 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.)
- (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 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.)
- (f) Normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METs) by ECG and cardiac imaging.

#### **6.21 Systemic Diseases and Miscellaneous Conditions.**

**6.21.1** Category A medical conditions shall include any systemic condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

**6.21.2** Category B medical conditions shall include the following:

- (1) Connective tissue disease, such as dermatomyositis, systemic lupus erythematosus, scleroderma, and rheumatoid arthritis
- (2)\*History of thermal, chemical, or electrical burn injury with residual functional deficit
- (3) Documented evidence of a predisposition to recurrent heat stress rhabdomyolysis, metabolic acidosis, or exertion-related incapacitation

#### **6.22 Tumors and Malignant Diseases.**

**6.22.1** Category A medical conditions shall include the following:

- (1) Malignant disease that is newly diagnosed, untreated, or currently being treated, or under active surveillance due to the increased risk for recurrence
- (2) Any tumor or similar condition that results in the candidate not being able to safely perform one or more of the essential job tasks



**6.22.2** Category B medical conditions shall be evaluated on the basis of an individual's current physical condition and on the staging and prognosis of the malignancy (i.e., likelihood that the disease will recur or progress), and include the following:

- (1)\*Benign tumors
- (2)\*History of CNS tumor or malignancy
- (3)\*History of head and neck malignancy
- (4)\*History of lung cancer
- (5)\*History of GI or GU malignancy
- (6)\*History of bone or soft tissue tumors or malignancies
- (7)\*History of hematological malignancy

### 6.23 Psychiatric Conditions.

**6.23.1** Category A medical conditions shall include any psychiatric condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

**6.23.2** Category B medical conditions shall include the following:

- (1) A history of psychiatric condition or substance abuse problem
- (2) Requirement for medications that increase an individual's risk of heat stress, or other interference with the ability to safely perform essential job tasks

### 6.24 Chemicals, Drugs, and Medications.

**6.24.1** Category A medical conditions shall include those that require chronic or frequent treatment with any of the following medications or classes of medications:

- (1) Narcotics, including methadone
- (2) Sedative-hypnotics
- (3) Full-dose or low-dose anticoagulation medications or any drugs that prolong prothrombin time (PT), partial thromboplastin time (PTT), or international normalized ratio (INR)
- (4) 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)
- (5)\*Respiratory medications: inhaled bronchodilators, inhaled corticosteroids, systemic corticosteroids, theophylline, and leukotriene receptor antagonists (e.g., Montelukast)
- (6) High-dose corticosteroids for chronic disease
- (7) Anabolic steroids
- (8) Any chemical, drug, or medication that results in the candidate not being able to safely perform one or more of the essential job tasks

**6.24.1.1** Tobacco use shall be a Category A medical condition (where allowed by law).

**6.24.1.2** Evidence of illegal drug use detected through testing, conducted in accordance with Substance Abuse and Mental Health Service Administration (SAMHSA), shall be a Category A medical condition.

**6.24.1.3** Evidence of clinical intoxication or a measured blood alcohol level that exceeds the legal definition of intoxication according to the AFIJ at the time of medical evaluation shall be a Category A medical condition.

**6.24.2\*** Category B medical conditions shall include the use of the following:

- (1) Cardiovascular agents
- (2) Stimulants
- (3) Psychiatric medications

- (4) Other than high-dose systemic corticosteroids
- (5) Antihistamines
- (6) Muscle relaxants
- (7) Leukotriene receptor antagonists (e.g., Montelukast) used for allergies that do not affect the lower respiratory system

## Chapter 7 Occupational Medical Evaluation of Members

### 7.1 General.

**7.1.1** The fire department shall establish and maintain a confidential occupational medical evaluation program for members.

**7.1.2** Occupational medical evaluations shall be conducted as a baseline for surveillance and annually thereafter.

**7.1.3\*** An occupational medical evaluation shall be performed following a member's occupational exposure, illness, injury, or protracted absence from the job.

**7.1.3.1** The scope of that evaluation shall be determined by the fire department physician after reviewing the type and severity of the condition.

**7.1.4** The components of the medical evaluations shall conform to all applicable U.S. OSHA standards, including 29 CFR 1910.120, "Hazardous waste operations and emergency response"; 29 CFR 1910.134, "Respiratory protection"; 29 CFR 1910.95, "Occupational noise exposure"; and 29 CFR 1910.1030, "Bloodborne pathogens."

### 7.2 Member Education Regarding Occupational Medical Evaluation Program.

**7.2.1** The fire department, the fire department physician, and member organizations where they exist shall be responsible to convey the purposes and importance of the annual occupational medical evaluation to members and to the AHJ.

**7.2.2** The purpose of the annual occupational medical evaluation of members shall include but cannot be limited to the following:

- (1) Identifying conditions that interfere with a member's physical or mental ability to safely perform essential job tasks without undue risk of harm to self or others
- (2) Monitoring the effects of exposure to specific biological, physical, or chemical agents on individual members
- (3) Detecting changes in a member's health that can be related to harmful working conditions
- (4) Detecting patterns of disease or injury occurrence in the workforce that could indicate underlying work-related problems
- (5)\*Providing members with information about their current health, promoting wellness, and referring them for appropriate further evaluation and treatment
- (6) Providing members with information and education about occupational hazards
- (7) Providing a cost-effective investment in work-related disease prevention, early detection, and health promotion for members
- (8) Complying with federal, state, provincial, local, and/or other jurisdictional requirements

### 7.3 Timing of the Annual Occupational Medical Evaluation of Members.

**7.3.1** All members shall receive a baseline medical evaluation after hiring and prior to performing fire fighter emergency functions and at least annually thereafter.