NFPA 1582
Standard on Medical Requirements for Fire Fighters

1997 Edition

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An International Codes and Standards Organization

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NFPA 1582

Standard on

Medical Requirements for Fire Fighters

1997 Edition

This edition of NFPA 1582, *Standard on Medical Requirements for Fire Fighters,* was prepared by the Technical Committee on Fire Service Occupational Medical and Health and acted on by the National Fire Protection Association, Inc., at its Annual Meeting held May 19–22, 1997, in Los Angeles, CA. It was issued by the Standards Council on July 24, 1997, with an effective date of August 15, 1997, and supersedes all previous editions.

This edition of NFPA 1582 was approved as an American National Standard on August 15, 1997.

Origin and Development of NFPA 1582

A joint task force of members representing both the Technical Committees on Fire Service Occupational Safety and Health and Fire Fighter Professional Qualifications began addressing medical requirements for fire fighters in March 1988. A standing subcommittee on Medical/Physical Requirements for Fire Fighters was created under the Fire Service Occupational Safety and Health Committee in 1990 and was responsible for the development of NFPA 1582.

This new document covers the medical requirements necessary for persons who perform fire-fighting tasks. Medical requirements that were previously contained in Section 2-2 of NFPA 1001, *Standard on Fire Fighter Professional Qualifications,* applied only to the entry level. They were deleted from NFPA 1001. Legal opinion and federal laws show that requirements set for a position must apply to anyone who would be or is in that position. These medical requirements are therefore intended to apply to candidates as well as to current fire fighters.

Two categories of medical conditions were created, Categories A and B. Category A represents conditions that, if they exist in the candidate or current fire fighter, would not allow this person to perform fire-fighting operations. Category B conditions must be evaluated on a case-by-case basis so that the fire department physician can determine if the medical condition in a particular candidate or current fire fighter would prevent that person from performing fire-fighting operations.

Medical evaluations, medical examinations, record keeping, and confidentiality are addressed in Chapter 2. Chapter 3 contains the actual medical conditions that comprise the requirements.

Extensive advisory and informational material was developed in the appendixes to aid fire department administrators and fire department physicians.

The Committee completed its work in January 1992, and the first edition was presented to the Association membership at the 1992 Annual Meeting in New Orleans, Louisiana.

The second edition of this standard reflects the numerous changes in medical technology that have impacted structural fire fighters. The technical committee was assisted by physicians whose expertise covered the areas of emergency medicine; vision; hearing; and cardiac, pulmonary, neurological, and metabolic conditions. The following physicians devoted numerous hours assisting the committee members with their deliberations: Daniel G. Samo, M.D.F.A.C.E.P.; Peter Orris, M.D., MPH; Terrence Moisan, M.D., FACP; and medical standards experts Gene Carmean, MPA; Sandra C. MacLean, M.A., CCC-A; Kathy Tinios, M.S.; and Susan W. Stang, Ph.D.

The technical committee endeavored to update six critical areas, and moved some of the previous Category A text to Category B. They then enhanced some of the Category A material that would prohibit an individual from being hired or to continue as a structural fire fighter. The committee also added additional appendix text in the areas of ADA requirements, explanatory material for both fire department administrators and fire department physicians, and sample physician checklist forms.

Additional explanatory material was added or enhanced to provide the user with additional information regarding medical conditions whose categories were changed. These include a number of cardiac conditions, diabetic conditions, seizure disorders, asthma, and therapeutic anti-coagulation.

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Committee Scope: This Committee shall have primary responsibility for documents on the occupational safety in the working environment of the fire service; and safety in the proper use of apparatus, tools, equipment, protective clothing, and protective breathing apparatus.

This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in membership may have occurred. A key to classifications is found at the back of this document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

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NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Appendix A.

Information on referenced publications can be found in Appendix F.

Chapter 1 Administration

1-1 Scope.

1-1.1 This standard contains medical requirements for fire fighters, including full-time or part-time employees and paid or unpaid volunteers.

1-1.2 These requirements are applicable to organizations providing rescue, fire suppression, and other emergency services, including public, military, private, and industrial fire departments.

1-1.3 This standard does not apply to industrial fire brigades that also can be known as emergency brigades, emergency response teams, fire teams, plant emergency organizations, or mine emergency response teams.

1-2 Purpose.

1-2.1 The purpose of this standard is to specify minimum medical requirements for candidates and current fire fighters.

1-2.2* The implementation of the medical requirements outlined in this standard will help ensure that candidates and current fire fighters will be medically capable of performing their required duties and will help to reduce the risk of occupational injuries and illnesses.

1-2.3 Nothing herein is intended to restrict any jurisdiction from exceeding these minimum requirements.

1-3 Implementation.

1-3.1 For candidates, the medical requirements of this standard shall be implemented when this standard is adopted by an authority having jurisdiction on an effective date specified by the authority having jurisdiction.

1-3.2* When this standard is adopted by a jurisdiction, the authority having jurisdiction shall set a date or dates for current fire fighters to achieve compliance with the requirements of this standard and shall be permitted to establish a phase-in schedule for compliance with specific requirements of this standard in order to minimize personal and departmental disruption.

1-4 Definitions.

Approved.* Acceptable to the authority having jurisdiction.

Authority Having Jurisdiction.* The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

Candidate.* A person who has made application to commence performance as a fire fighter.

Category A Medical Condition. A medical condition that would preclude a person from performing as a fire fighter in a training or emergency operational environment by presenting a significant risk to the safety and health of the person or others.

Category B Medical Condition. A medical condition that, based on its severity or degree, could preclude a person from performing as a fire fighter in a training or emergency operational environment by presenting a significant risk to the safety and health of the person or others.

Current Fire Fighter. A person who is already a member and whose duties require the performance of essential fire-fighting functions.

Drug. Any substance, chemical, over-the-counter medication, or prescribed medication that could affect the performance of the fire fighter.

Emergency Operations. Activities of the fire department relating to rescue, fire suppression, and special operations, including response to the scene of the incident and all functions performed at the scene.

Essential Job Function. Task or assigned duty that is critical to successful performance of the job.

Evaluation. See Medical Evaluation.

Fire Department Physician. The licensed doctor of medicine or osteopathy who has been designated by the fire department to provide professional expertise in the areas of occupational safety and health as they relate to emergency services.

Fire Fighter.* A member of a fire department whose duties require the performance of essential fire-fighting functions or substantially similar functions.

Functional Capacity Evaluation. An assessment of the correlation between that individual's capabilities and the essential job functions.

Medical Evaluation. The analysis of information for the purpose of making a determination of medical certification. Medical evaluation can include a medical examination.

Medical Examination. An examination performed or directed by the fire department physician that incorporates the components described in 2-4.1.4.

Medically Certified. A determination by the fire department physician that the candidate or current fire fighter meets the medical requirements of this standard.

Member. A person involved in performing the duties and responsibilities of a fire department, under the auspices of the organization. A fire department member can be a full-time or part-time employee or a paid or unpaid volunteer, can occupy any position or rank within the fire department, and can engage in emergency operations.

Shall. Indicates a mandatory requirement.

Should. Indicates a recommendation or that which is advised but not required.

Chapter 2 Medical Process

2-1 Medical Evaluation Process.

2-1.1* The fire department shall establish and implement a medical evaluation process for candidates and current fire fighters.

2-1.2 The medical evaluation process shall include preplacement medical evaluations, periodic medical evaluations, and return-to-duty medical evaluations.

2-1.3 The fire department shall ensure that the medical evaluation process and all medical evaluations meet all of the requirements of this section.

2-1.4 Each candidate or current fire fighter shall cooperate, participate, and comply with the medical evaluation process and shall provide complete and accurate information to the fire department physician.

2-1.5* Each candidate or current fire fighter shall, on a timely basis, report to the fire department physician any exposure or medical condition that could interfere with the ability of the individual to perform as a fire fighter.

2-1.6 If the candidate or current fire fighter presents with an acute medical problem or newly acquired chronic medical condition, the medical evaluation shall be postponed until that person has recovered from this condition and presents to the fire department for review.

2-2 Fire Department Physician.

2-2.1* The fire department physician shall be a licensed doctor of medicine or osteopathy.

2-2.2* The fire department physician shall be qualified to provide professional expertise in the areas of occupational safety and health as they relate to emergency services.

2-2.3* For the purpose of conducting medical evaluations, the fire department physician shall understand the physiological and psychological demands placed on fire fighters and shall understand the environmental conditions under which fire fighters must perform.

2-2.4 Fire Department Physician Roles.

2-2.4.1 The fire department physician shall evaluate the person to ascertain the presence of any medical conditions listed in this standard.

2-2.4.2 When medical evaluations are conducted by a physician other than the fire department physician, the evaluation shall be reviewed and approved by the fire department physician.

2-3* Preplacement Medical Evaluation.

2-3.1 The candidate shall be certified by the fire department physician as meeting the medical requirements of Chapter 3 of this standard prior to entering into a training program to become a fire fighter or performing in an emergency operational environment as a fire fighter.

2-3.2 The candidate shall be evaluated according to the medical requirements of Chapter 3 of this standard to assess the effect of medical conditions on the candidate's ability to perform as a fire fighter.

2-3.3 A candidate shall not be certified as meeting the medical requirements of this standard if the fire department physician determines that the candidate has any Category A medical condition specified in Chapter 3 of this standard.

2-3.4* A candidate shall not be certified as meeting the medical requirements of this standard if the fire department physician determines that the candidate has a Category B medical condition specified in Chapter 3 of this standard that is of sufficient severity to prevent the candidate from performing, with or without reasonable accommodation, the essential functions of a fire fighter without posing a significant risk to the safety and health of the candidate or others.

2-3.4.1 The determination of whether there is reasonable accommodation shall be made by the authority having jurisdiction in conjunction with the fire department physician.

2-3.5 If the candidate presents with an acute medical problem or newly acquired chronic medical condition that interferes with the candidate's ability to perform the functions of a fire fighter, medical certification shall be postponed until that person has recovered from this condition and presents to the fire department for review.

2-4* Periodic Medical Evaluation.

2-4.1 The current fire fighter shall be annually certified by the fire department physician as meeting the medical requirements of Chapter 3 of this standard to determine that fire fighter's medical ability to continue participating in a training or emergency operational environment as a fire fighter.

2-4.1.1 The components of the annual medical evaluation specified in 2-4.1.2 of this section shall be permitted to be performed by qualified personnel as authorized by the fire department physician. When other qualified personnel are used, the fire department physician shall review the data gathered during the evaluation.

2-4.1.2 The annual medical evaluation shall consist of the following:

(a) An interval medical history

(b) An interval occupational history, including significant exposures

(c) Height and weight

(d) Blood pressure

2-4.1.3* The annual medical evaluation shall include a medical examination according to the following schedule:

(a) Ages 29 and under — every 3 years

(b) Ages 30 to 39 — every 2 years

(c) Ages 40 and above — every year

2-4.1.4* The medical examination shall include examination of the following components:

(a) Vital signs, namely, pulse, respiration, blood pressure, and, if indicated, temperature

(b) Dermatological system

(c) Ears, eyes, nose, mouth, throat

(d) Cardiovascular system

(e) Respiratory system

(f) Gastrointestinal system

(g) Genitourinary system

(h) Endocrine and metabolic systems

(i) Musculoskeletal system
(j) Neurological system
(k) Audiometry
(l) Visual acuity and peripheral vision testing
(m) Pulmonary function testing
(n) Laboratory testing, if indicated
(o) Diagnostic imaging, if indicated
(p) Electrocardiography, if indicated

2-4.2 A current fire fighter shall not be certified as meeting the medical requirements of this standard if the fire department physician determines that the fire fighter has any Category A medical condition specified in Chapter 3 of this standard.

2-4.3* A current fire fighter shall not be certified as meeting the medical requirements of this standard if the fire department physician determines that the fire fighter has a Category B condition specified in Chapter 3 of this standard that is of sufficient severity to prevent the fire fighter from performing, with or without reasonable accommodation, the essential functions of a fire fighter without posing a significant risk to the safety and health of the fire fighter or others.

2-4.3.1 The determination of reasonable accommodation shall be made by the authority having jurisdiction in conjunction with the fire department physician.

2-4.4 If the current fire fighter presents with an acute illness or recently acquired chronic medical condition, the evaluation shall be deferred until the fire fighter has recovered from the condition and presents to the fire department to return to duty.

2-5 Return-to-Duty Medical Evaluation.

2-5.1 A current fire fighter who has been absent from duty for a medical condition of a nature or duration that could affect performance as a fire fighter shall be evaluated by the fire department physician before returning to duty.

2-5.2 The fire department physician shall not medically certify the current fire fighter for return to duty if any Category A medical condition specified in Chapter 3 of this standard is present.

2-5.3* The fire department physician shall not medically certify the current fire fighter for return to duty if any Category B medical condition specified in Chapter 3 of this standard is present that is determined to be severe enough to affect the fire fighter's performance as a fire fighter. The fire department physician, in conjunction with the authority having jurisdiction, shall take into account the fire fighter's current duty assignment and alternative duty assignments or other programs that would allow a fire fighter to gradually return to full duty.

2-6 Medical Evaluation Records, Results, Reporting, and Confidentiality.

2-6.1 All medical information collected as part of a medical evaluation shall be considered confidential medical information and shall be released by the fire department physician only with the specific written consent of the candidate or current fire fighter.

2-6.2 The fire department physician shall report the results of the medical evaluation to the candidate or current fire fighter, including any medical condition(s) disclosed during the medical evaluation, and the recommendation as to whether the candidate or current fire fighter is medically certified to perform as a fire fighter.

2-6.3 The fire department physician shall inform the fire department only as to whether or not the candidate or current fire fighter is medically certified to perform as a fire fighter. The specific written consent of the candidate or current fire fighter shall be required in order to release confidential medical information regarding this condition to the fire department.

Chapter 3* Category A and Category B Medical Conditions

3-1 Head and Neck.

3-1.1 Head.

3-1.1.1 There shall be no Category A medical conditions.

3-1.1.2* Category B medical conditions shall include the following:

(a) Deformities of the skull such as depressions or exostoses

(b) Deformities of the skull associated with evidence of disease of the brain, spinal cord, or peripheral nerves

(c) Loss or congenital absence of the bony substance of the skull

(d) Any other head condition that results in a person not being able to perform as a fire fighter

3-1.2 Neck.

3-1.2.1 There shall be no Category A medical conditions.

3-1.2.2* Category B medical conditions shall include the following:

(a) Thoracic outlet syndrome

(b) Congenital cysts, chronic draining fistulas, or similar lesions

(c) Contraction of neck muscles

(d) Any other neck condition that results in a person not being able to perform as a fire fighter

3-2 Eyes and Vision.

3-2.1* Category A medical conditions shall include the following:

(a) Far visual acuity. Far visual acuity shall be at least 20/30 binocular corrected with contact lenses or spectacles. Far visual acuity uncorrected shall be at least 20/100 binocular for wearers of hard contacts or spectacles. Successful long-term soft contact lens wearers shall not be subject to the uncorrected criterion.

(b) Peripheral vision. Visual field performance without correction shall be 140 degrees in the horizontal meridian in each eye.

3-2.2* Category B medical conditions shall include the following:

(a) Diseases of the eye such as retinal detachment, progressive retinopathy, or optic neuritis

(b) Ophthalmological procedures such as radial keratotomy or repair of retinal detachment

(c) Any other eye condition that results in a person not being able to perform as a fire fighter

3-3 Ears and Hearing.

3-3.1 There shall be no Category A medical conditions.

3-3.2* Category B medical conditions shall include the following:

(a) Hearing deficit in the pure tone thresholds in the unaided worst ear

EITHER

1. Greater than 25 dB in three of the four frequencies
    a. 500 Hz
    b. 1000 Hz
    c. 2000 Hz
    d. 3000 Hz

OR

2. Greater than 30 dB in any one of the three frequencies
    a. 500 Hz
    b. 1000 Hz
    c. 2000 Hz

AND

an average greater than 30 dB for the four frequencies
    a. 500 Hz
    b. 1000 Hz
    c. 2000 Hz
    d. 3000 Hz

(b) Atresia, severe stenosis, or tumor of the auditory canal

(c) Severe external otitis

(d) Severe agenesis or traumatic deformity of the auricle

(e) Severe mastoiditis or surgical deformity of the mastoid

(f) Meniere's syndrome or labyrinthitis

(g) Otitis media

(h) Any other ear condition that results in a person not being able to perform as a fire fighter; AND, in addition to the above conditions, is unable to pass a job-specific functional hearing task test OR a Hearing In Noise Test.

3-4 Dental.

3-4.1 There shall be no Category A medical conditions.

3-4.2* Category B medical conditions shall include the following:

(a) Diseases of the jaws or associated tissues

(b) Orthodontic appliances

(c) Oral tissues, extensive loss

(d) Relationship between the mandible and maxilla that precludes satisfactory postorthodontic replacement or ability to use protective equipment

(e) Any other dental condition that results in a person not being able to perform as a fire fighter

3-5 Nose, Oropharynx, Trachea, Esophagus, and Larynx.

3-5.1* Category A medical conditions shall include the following:

(a) Tracheostomy

(b) Aphonia

(c) Anosmia

3-5.2* Category B medical conditions shall include the following:

(a) Congenital or acquired deformity

(b) Allergic respiratory disorder

(c) Sinusitis, recurrent

(d) Dysphonia

(e) Any other nose, oropharynx, trachea, esophagus, or larynx condition that results in a person not being able to perform as a fire fighter or to communicate effectively

3-6 Lungs and Chest Wall.

3-6.1* Category A medical conditions shall include the following:

(a) Active hemoptysis

(b) Empyema

(c) Current pneumonia

(d) Pulmonary hypertension

(e) Active tuberculosis

(f) Infectious diseases of the lungs or pleural space

3-6.2* Category B medical conditions shall include the following:

(a) Pulmonary resectional surgery, chest wall surgery, pneumothorax

(b) Bronchial asthma or reactive airways disease

(c) Fibrothorax, chest wall deformity, diaphragm abnormalities

(d) Chronic obstructive airways disease

(e) Hypoxemic disorders

(f) Interstitial lung diseases

(g) Pulmonary vascular diseases, pulmonary embolism

(h) Bronchiectasis

3-7 Heart and Vascular System.

3-7.1 Heart.

3-7.1.1* Category A medical conditions shall include the following:

(a) Angina pectoris, current

(b) Left bundle branch block or second-degree Type II atrioventricular block

(c) Heart failure, current

(d) Acute pericarditis, endocarditis, or myocarditis

(e) Syncope, recurrent

(f) Automatic implantable cardiac defibrillator

3-7.1.2* Category B medical conditions shall include the following:

(a) Significant valvular lesions of the heart, including prosthetic valves

(b) Coronary artery disease, including history of myocardial infarction, coronary artery bypass surgery, or coronary angioplasty, and similiar procedures

(c) Atrial tachycardia, flutter, or fibrillation

(d) Third-degree atrioventricular block

(e) Ventricular tachycardia

(f) Hypertrophy of the heart

(g) Recurrent paroxysmal tachycardia

(h) History of a congenital abnormality

(i) Chronic pericarditis, endocarditis, or myocarditis

(j) Cardiac pacemaker

(k) Coronary artery vasospasm

(l) Any other cardiac condition that results in a person not being able to perform as a fire fighter

3-7.2 Vascular System.

3-7.2.1 There shall be no Category A medical conditions.

3-7.2.2* Category B medical conditions shall include the following:

(a) Hypertension

(b) Peripheral vascular disease such as Raynaud's phenomenon

(c) Recurrent thrombophlebitis

(d) Chronic lymphedema due to lymphadenopathy or severe venous valvular incompetency

(e) Congenital or acquired lesions of the aorta or major vessels

(f) Marked circulatory instability as indicated by orthostatic hypotension, persistent tachycardia, and severe peripheral vasomotor disturbances

(g) Aneurysm of the heart or major vessel

(h) Any other vascular condition that results in a person not being able to perform as a fire fighter

3-8 Abdominal Organs and Gastrointestinal System.

3-8.1* Chronic active hepatitis shall be a Category A medical condition.

3-8.2* Category B medical conditions shall include the following:

(a) Cholecystitis

(b) Gastritis

(c) Hemorrhoids

(d) Acute hepatitis

(e) Hernia

(f) Inflammatory bowel disease

(g) Intestinal obstruction

(h) Pancreatitis

(i) Resection, bowel

(j) Ulcer, gastrointestinal

(k) Cirrhosis, hepatic or biliary

(l) Any other gastrointestinal condition that results in a person not being able to perform the duties of fire fighter

3-9 Genitourinary System.

3-9.1 Reproductive.

3-9.1.1 There shall be no Category A medical conditions.

3-9.1.2* Category B medical conditions shall include the following:

(a) Pregnancy, for its duration

(b) Dysmenorrhea

(c) Endometriosis, ovarian cysts, or other gynecologic conditions

(d) Testicular or epididymal mass

(e) Any other genital condition that results in a person not being able to perform as a fire fighter

3-9.2 Urinary System.

3-9.2.1 There shall be no Category A medical conditions.

3-9.2.2* Category B medical conditions shall include the following:

(a) Diseases of the kidney

(b) Diseases of the ureter, bladder, or prostate

(c) Any other urinary condition that results in a person not being able to perform as a fire fighter

3-10 Spine, Scapulae, Ribs, and Sacroiliac Joints.

3-10.1 There shall be no Category A medical conditions.

3-10.2* Category B medical conditions shall include the following:

(a) Arthritis

(b) Structural abnormality, fracture, or dislocation

(c) Nucleus pulposus, herniation of or history of laminectomy

(d) Any other spinal condition that results in a person not being able to perform as a fire fighter

3-11 Extremities.

3-11.1 There shall be no Category A medical conditions.

3-11.2* Category B medical conditions shall include the following:

(a) Llimitation of motion of a joint

(b) Amputation or deformity of a joint or limb

(c) Dislocation of a joint

(d) Joint reconstruction, ligamentous instability, or joint replacement

(e) Chronic osteoarthritis or traumatic arthritis

(f) Inflammatory arthritis

(g) Any other extremity condition that results in a person not being able to perform as a fire fighter

3-12 Neurological Disorders.

3-12.1* Category A medical conditions shall include the following:

(a) Ataxias of heredo-degenerative type

(b) Cerebral arteriosclerosis as evidenced by documented episodes of neurological impairment

(c) Multiple sclerosis with activity or evidence of progression within previous three years

(d) Progressive muscular dystrophy or atrophy

(e) All epileptic conditions to include simple partial, complex partial, generalized, and psychomotor seizure disorders other than those with complete control during previous five years, normal neurological examination, and definitive statement from qualified neurological specialist. If a change is made in the medical regimen that has provided a five-year seizure-free interval of an epileptic fire fighter, that individual shall not be cleared for return to fire-fighting duty until he or she has completed five years without a seizure on the new regimen.

3-12.2* Category B medical conditions shall include the following:

(a) Congenital malformations

(b) Migraine

(c) Clinical disorders with paresis, paralysis, dyscoordination, deformity, abnormal motor activity, abnormality of sensation, or complaint of pain

(d) Subarachnoid or intracerebral hemorrhage

(e) Abnormalities from recent head injury such as severe cerebral contusion or concussion

(f) Any other neurological condition that results in a person not being able to perform as a fire fighter

3-13 Skin.

3-13.1 There shall be no Category A medical conditions.

3-13.2* Category B medical conditions shall include the following:

(a) Acne or inflammatory skin disease

(b) Eczema

(c) Any other dermatologic condition that results in the person not being able to perform as a fire fighter

3-14 Blood and Blood-Forming Organs.

3-14.1* Category A medical conditions shall include the following:

(a) Hemorrhagic states requiring replacement therapy

(b) Sickle cell disease (homozygous)

3-14.2* Category B medical conditions shall include the following:

(a) Anemia

(b) Leukopenia

(c) Polycythemia vera

(d) Splenomegaly

(e) History of thromboembolic disease

(f) Any other hematological condition that results in a person not being able to perform as a fire fighter

3-15 Endocrine and Metabolic Disorders.

3-15.1* Diabetes mellitus, which is treated with insulin or an oral hypoglycemic agent and where an individual has a history of one or more episodes of incapacitating hypoglycemia, shall be a Category A medical condition.

3-15.2* Category B medical conditions shall include the following:

(a) Diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance

(b) Nutritional deficiency disease or metabolic disorder

(c) Diabetes mellitus requiring treatment with insulin or oral hypoglycemic agent without a history of incapacitating hypoglycemia

(d) Any other endocrine or metabolic condition that results in a person not being able to perform as a fire fighter

3-16 Systemic Diseases and Miscellaneous Conditions.

3-16.1 There shall be no Category A medical conditions.

3-16.2* Category B medical conditions shall include the following:

(a) Connective tissue disease, such as dermatomyositis, lupus erythematosus, scleroderma, and rheumatoid arthritis

(b) Residuals from past thermal injury

(c) Documented evidence of a predisposition to heat stress with recurrent episodes or resulting residual injury

(d) Any other systemic condition that results in a person not being able to perform as a fire fighter

3-17 Tumors and Malignant Diseases.

3-17.1 There shall be no Category A medical conditions.

3-17.2* Category B medical conditions shall include the following:

(a) Malignant disease that is newly diagnosed, untreated, or currently being treated. Candidates shall be subject to the provisions of 2-3.5 of this standard. Current fire fighters shall be subject to the provisions of 2-4.4 of this standard.

(b) Treated malignant disease shall be evaluated based on that person's current physical condition and on the likelihood of that person's disease to recur or progress.

(c) Any other tumor or similar condition that results in a person not being able to perform as a fire fighter.

3-18 Psychiatric Conditions.

3-18.1 There shall be no Category A medical conditions.

3-18.2* Category B medical conditions shall include the following:

(a) A history of psychiatric condition or substance abuse problem. Candidates and current fire fighters shall be evaluated based on the individual's current condition

(b) Any other psychiatric condition that results in a person not being able to perform as a fire fighter

3-19 Chemicals, Drugs, and Medications.

3-19.1 There shall be no Category A medical conditions.

3-19.2* Category B medical conditions shall include the use of the following:

(a) Anticoagulant agents

(b) Cardiovascular agents

(c) Narcotics

(d) Sedative-hypnotics

(e) Stimulants

(f) Psychoactive agents

(g) Steroids

(h) Any other chemical, drug, or medication that results in a person not being able to perform as a fire fighter

Appendix A Explanatory Material

This appendix is not a part of the requirements of this NFPA document but is included for informational purposes only.

A-1-2.2 There is a direct relationship between the medical requirements and the job description of fire fighters. The job description should include all essential job functions of fire fighters, both emergency and nonemergency. Fire fighters perform a variety of emergency operations including fire fighting, emergency medical care, hazardous materials mitiga-

tion, and special operations. Nonemergency duties can include and are not limited to training, station and vehicle maintenance, and physical fitness. Each fire department must identify and develop a written job description for fire fighters. Appendix C, Essential Fire-Fighting Functions, provides an example of essential job functions for fire fighters.

A-1-3.2 The specific determination of the authority having jurisdiction depends on the mechanism under which this standard is adopted and enforced. Where this standard is adopted voluntarily by a particular fire department for its own use, the authority having jurisdiction should be the fire chief or the political entity that is responsible for the operation of the fire department. Where this standard is legally adopted and enforced by a body having regulatory authority over a fire department, such as federal, state, or local government or political subdivision, this body is responsible for making those determinations as the authority having jurisdiction. The compliance program should take into account the services the fire department is required to provide, the financial resources available to the fire department, the availability of personnel, the availability of trainers, and such other factors as will affect the fire department's ability to achieve compliance.

A-1-4 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A-1-4 Authority Having Jurisdiction. The phrase "authority having jurisdiction" is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A-1-4 Candidate. In an employment context, the Americans with Disabilities Act (discussed in further detail in Appendix D) requires that any medical examination to be conducted take place after an offer of employment is made and prior to the commencement of duties. Therefore, in the employment context, the definition of "candidate" should be applied so as to be consistent with that requirement.

Volunteer fire fighters have been deemed to be "employees" in some states or jurisdictions. Volunteer fire departments should seek legal counsel as to their legal responsibilities in these matters.

A-1-4 Fire Fighter. See Appendix C, Essential Fire-Fighting Functions.

A-2-1.1 See Appendix D, Guide for Fire Department Administrators.

A-2-1.5 Exposures and medical conditions that should be reported if they can interfere with the ability of the individual to perform as a fire fighter include, but are not limited to, the following:

(a) Exposures to hazardous materials or toxic substances
(b) Exposure to infectious or contagious diseases
(c) Illness or injury
(d) Use of prescription or nonprescription drugs
(e) Pregnancy

A-2-2.1 See Appendix D, Section D-2, Choosing a Fire Department Physician.

A-2-2.2 See Appendix B, Guide for Fire Department Physicians.

A-2-2.3 See Appendix B, Section B-2, Occupational Safety and Health Problems for Fire Fighters, and Appendix C, Essential Fire-Fighting Functions.

A-2-3 See Appendix B, Section B-3, Guidance for Medical Evaluations.

A-2-3.4 See Appendix D, Section D-1, Legal Considerations in Applying the Standard.

A-2-4 See Appendix B, Section B-3, Guidance for Medical Evaluations.

A-2-4.1.3 At the discretion of the fire department physician an examination can be performed sooner than would be expected from the schedule given in 2-4.1.3. Current medical conditions and coronary risk factors could mandate more frequent medical examinations.

A-2-4.1.4 See Appendix B, Guide for Fire Department Physicians.

A-2-4.3 See Appendix D, Section D-1, Legal Considerations in Applying the Standard.

A-2-5.3 See Appendix D, Section D-1, Legal Considerations in Applying the Standard.

A-3 The medical conditions listed are organized by organ system. In the corresponding Appendix A explanatory material, a diagnostic example is often included with the list to help the examiner understand the type of condition that might result in rejection or acceptance. In addition, the rationale for the exclusion is presented in terms of the effect of the medical condition on the capability of the person to perform as a fire fighter.

A-3-1.1.2 Category B medical conditions of the head include the following:

(a) Deformities of the skull, such as depressions or exostoses, of a degree that interferes with the use of protective equipment. Deformities of the skull can result in the fire fighter's inability to properly wear protective equipment.

(b) Deformities of the skull associated with evidence of disease of the brain, spinal cord, or peripheral nerves. These deformities can result in the potential for sudden incapacita-

tion; the inability to properly wear protective equipment; and the inability to communicate effectively due to oropharyngeal dysfunction.

(c) Loss or congenital absence of the bony substance of the skull (if associated with disease interfering with performance or if appropriate protection cannot be provided for area without interfering with protective equipment and vision). Loss or congenital absence of the bony substance of the skull can result in the inability to properly wear protective equipment, and the inability to communicate effectively due to oropharyngeal dysfunction.

(d) Any other head condition that results in a person not being able to perform as a fire fighter

A-3-1.2.2 Category B medical conditions of the neck include the following:

(a) Thoracic outlet syndrome (symptomatic). Thoracic outlet syndrome can result in frequent episodes of pain or inability to perform work.

(b) Congenital cysts, chronic draining fistulas, or similar lesions (if lesions or underlying disease interferes with performance). Congenital cysts, chronic draining fistulas, or similar lesions can result in the inability to properly wear protective equipment, and the inability to communicate effectively due to oropharyngeal dysfunction.

(c) Contraction of neck muscles (if it interferes with wearing of protective equipment or ability to perform duties). The contraction of neck muscles may result in the inability to properly wear protective equipment, and the inability to perform functions as a fire fighter due to limitation of flexibility.

(d) Any other neck condition that results in a person not being able to perform as a fire fighter

A-3-2.1 Category A medical conditions of the eyes and vision include the following:

(a) Far visual acuity. Far visual acuity is at least 20/30 binocular corrected with contact lenses or spectacles. Far visual acuity uncorrected is at least 20/100 binocular for wearers of hard contacts or spectacles. Successful long-term soft contact lens wearers (that is six months without a problem) are not subject to the uncorrected standard. Inadequate far visual acuity can result in the failure to be able to read placards and street signs or to see and respond to imminently hazardous situations.

(b) Peripheral vision. Visual field performance without correction is 140 degrees in the horizontal meridian in each eye. (Fire fighters must not have just monocular vision.) Inadequate peripheral vision can result in the failure to be able to read placards and street signs or to see and respond to imminently hazardous situations.

A-3-2.2 Category B medical conditions of the eyes and vision include the following:

(a) Diseases of the eye such as retinal detachment, progressive retinopathy, or optic neuritis (severe or progressive). These diseases of the eye can result in the failure to read placards and street signs or to see and respond to imminently hazardous situations.

(b) Ophthalmological procedures such as radial keratotomy and repair of retinal detachment. Sufficient time (that is, six months) must have passed to allow stabilization of visual acuity and to ensure that there are no postsurgical complications. These ophthalmological procedures may result in the failure to be able to read placards and street signs or to see and respond to imminently hazardous situations.

(c) Any other eye condition that results in a person not being able to perform as a fire fighter

Formerly, color vision deficiency was listed as a Category B medical condition. However, it is felt that within most cases this condition will not affect the ability of a fire fighter to perform the essential functions of his or her job. The fire service physician should consider the color vision deficiency of the individual and consider the color vision requirements of the fire fighter's job and reach an individual determination.

A-3-3.2 Category B medical conditions of hearing include the following:

(a) Hearing deficit in pure tone thresholds in the unaided worst ear

EITHER

1. Greater than 25 dB in three of the four frequencies
   a. 500 Hz
   b. 1000 Hz
   c. 2000 Hz
   d. 3000 Hz

OR

2. Greater than 30 dB in any one of the three frequencies
   a. 500 Hz
   b. 1000 Hz
   c. 2000 Hz

AND

an average greater than 30 dB for the four frequencies
   a. 500 Hz
   b. 1000 Hz
   c. 2000 Hz
   d. 3000 Hz

The inability to hear sounds of low intensity or to distinguish voice from background noise can lead to a failure to respond to imminently hazardous situations.

(b) Atresia, severe stenosis, or tumor of the auditory canal. These conditions can result in the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

(c) Severe external otitis (that is recurrent loss of hearing). Severe external otitis can result in the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

(d) Severe agenesis or traumatic deformity of the auricle to the degree that interferes with ability to wear protective equipment or with hearing acuity. Severe agenesis or traumatic deformity of the auricle can result in the inability to properly wear protective equipment, and the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

(e) Severe mastoiditis or surgical deformity of the mastoid. Severe mastoiditis or surgical deformity of the mastoid can result in the inability to properly wear protective equipment, and the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

(f) Meniere's syndrome or labyrinthitis (severe). Meniere's syndrome or severe labyrinthitis may result in the potential for sudden incapacitation and the inability to perform job functions due to limitations of balance.

(g) Otitis media (chronic). Otitis media can result in frequent episodes of pain or the inability to perform work and the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

(h) Any other ear condition that results in a person not being able to perform as a fire fighter

A-3-4.2 Category B dental medical conditions include the following:

(a) Diseases of the jaws or associated tissues (those that are incapacitating or preclude ability to use protective equipment). Diseases of the jaws or associated tissues can result in the inability to properly wear protective equipment.

(b) Orthodontic appliances (those that preclude the ability to use protective equipment). The wearing of orthodontic appliances can result in the inability to properly wear protective equipment.

(c) Oral tissues, extensive loss (that which precludes satisfactory postorthodontic replacement or ability to use protective equipment). Extensive loss of oral tissues may result in the inability to properly wear protective equipment and the inability to communicate effectively due to oropharyngeal dysfunction.

(d) Relationship between the mandible and maxilla that precludes satisfactory postorthodontic replacement or ability to use protective equipment. This condition can result in the inability to properly wear protective equipment and the inability to communicate effectively due to oropharyngeal dysfunction.

(e) Any other dental condition that results in a person not being able to perform as a fire fighter

A-3-5.1 Category A medical conditions of the nose, oropharynx, trachea, esophagus, and larynx include the following:

(a) Tracheostomy. A tracheostomy can result in the inability to properly wear protective equipment, the inability to perform job functions due to limitations of endurance, and the inability to communicate effectively due to oropharyngeal dysfunction.

(b) Aphonia, regardless of cause. Aphonia can result in the inability to communicate effectively due to oropharyngeal dysfunction.

(c) Anosmia. Anosmia can result in the inability to smell smoke or hazardous materials, resulting in failure to respond to imminently hazardous situations.

A-3-5.2 Category B medical conditions of the nose, oropharynx, trachea, esophagus, and larynx include the following:

(a) Congenital or acquired deformity that interferes with the ability to use protective equipment. A congenital or acquired deformity can result in the inability to properly wear protective equipment.

(b) Allergic respiratory disorder (uncontrolled). Allergic respiratory disorder can result in frequent episodes of pain or the inability to perform work and the inability to perform functions as a fire fighter due to limitations of endurance.

(c) Sinusitis, recurrent (severe, requiring repeated hospitalizations or causing impairment). Recurrent sinusitis can result in frequent episodes of pain and the inability to perform work.

(d) Dysphonia (severe). Severe dysphonia can result in the inability to communicate effectively due to oropharyngeal dysfunction.

(e) Any other nose, oropharynx, trachea, esophagus, or larynx condition that results in a person not being able to perform as a fire fighter or to communicate effectively.

A-3-6.1 Category A medical conditions of the lungs and chest wall include active hemoptysis, empyema, current pneumonia, pulmonary hypertension, active tuberculosis, or infectious diseases of the lungs or pleural space. These conditions can result in the inability to perform functions as a fire fighter due to limitations of endurance.

A-3-6.2 Category B medical conditions of the lungs and chest wall include the following:

(a) Pulmonary resectional surgery, chest wall surgery, pneumothorax (that is history of recurrent spontaneous pneumothorax). These conditions can result in the inability to perform functions as a fire fighter due to limitations of strength or endurance and may result in the potential for sudden incapacitation.

(b) Bronchial asthma or reactive airways disease (frequent medication use or symptoms caused by exposures to exertion, heat and cold, or products of combustion and other irritant inhalation). Bronchial asthma or reactive airways disease can result in frequent episodes of pain or the inability to perform work, the potential for sudden incapacitation, and the inability to perform functions as a fire fighter due to limitations of endurance.

(c) Fibrothorax, chest wall deformity, diaphragm abnormalities. Fibrothorax, chest wall deformity, and diaphragm abnormalities can result in the inability to perform functions as a fire fighter due to limitations of endurance.

(d) Chronic obstructive airways disease. Chronic obstructive airways disease can result in the inability to perform functions as a fire fighter due to limitations of endurance.

(e) Hypoxemic disorders. Hypoxemic disorders can result in the inability to perform functions as a fire fighter due to limitations of endurance.

(f) Interstitial lung diseases. Interstitial lung diseases can result in the inability to perform functions as a fire fighter due to limitations of endurance.

(g) Pulmonary vascular diseases, pulmonary embolism. Pulmonary vascular diseases and pulmonary embolism can result in frequent episodes of pain and the inability to perform functions as a fire fighter due to limitations of endurance.

(h) Bronchiectasis with significant residual impairment of pulmonary function or requiring frequent therapy. Bronchiectasis can result in the inability to perform functions as a fire fighter due to limitations of endurance.

(i) Any other pulmonary or chest wall condition that results in a person not being able to perform as a fire fighter

A-3-7.1.1 Category A medical conditions of the heart and vascular system include the following:

(a) Angina pectoris, current. Angina pectoris can result in frequent episodes of pain or inability to perform work, progressive illness leading to functional impairment, and the potential for sudden incapacitation.

(b) Left bundle branch block or second-degree Type II artioventricular block. This condition can result in the potential for sudden incapacitation.

(c) Heart failure, current. Heart failure can result in frequent episodes of pain or inability to perform work, progressive illness leading to functional impairment, and the potential for sudden incapacitation.

(d) Acute pericarditis, endocarditis, or myocarditis. These conditions can result in frequent episodes of pain or the inability to perform work.

(e) Syncope, recurrent. Recurrent syncope can result in the potential for sudden incapacitation.

(f) Automatic implantable cardiac defibrillator. An automatic implantable cardiac defibrillator can result in the potential for sudden incapacitation.

A-3-7.1.2 Category B medical conditions of the heart and vascular system include the following:

(a) Significant valvular lesions of the heart, including prosthetic valves. Specific recommendations include the following:

Mitral stenosis. Mitral stenosis is acceptable if in sinus rhythm and stenosis is mild, that is, valve area > 1.5 cm^2 or pulmonary artery systolic pressure < 35 mm Hg.

Mitral insufficiency. Mitral insufficiency is acceptable if in sinus rhythm with normal left ventricular size and function.

Aortic stenosis. Aortic stenosis is acceptable if stenosis is mild, that is, mean aortic valvular pressure gradient < 20 mm Hg.

Aortic regurgitation. Aortic regurgitation is acceptable if left ventricular size is normal or slightly increased and systolic function is normal.

Prosthetic valves. Prosthetic valves are acceptable unless full anticoagulation is in effect.

(b) Coronary artery disease, including history of myocardial infarction, coronary artery bypass surgery, coronary angioplasty, and similiar procedures. Persons at mildly increased risk for sudden incapacitation are acceptable for fire fighting. Mildly increased risk is defined by the presence of each of the following:

1. Normal left ventricular ejection fraction

2. Normal exercise tolerance, > 10 metabolic equivalents (METS)

3. Absence of exercise-induced ischemia by exercise testing

4. Absence of exercise-induced complex ventricular arrhythmias

5. Absence of hemodynamically significant stenosis on all major coronary arteries (> or = 70 percent lumen diameter narrowing), or successful myocardial revascularization

(c) Atrial tachycardia, flutter, or fibrillation

(d) Third-degree atrioventricular block (will result in disqualification unless exercise can be performed with an adequate heart rate response). A third-degree atrioventricular block can result in frequent episodes of pain or the inability to perform work, and the potential for sudden incapacitation.

(e) Ventricular tachycardia. Ventricular tachycardia can result in the potential for sudden incapacitation and the inability to perform job functions due to limitations of strength or endurance.

(f) Hypertrophy of the heart. Hypertrophy of the heart can result in the potential for sudden incapacitation and the inability to perform job functions due to limitations of endurance.

(g) Recurrent paroxysmal tachycardia. Recurrent paroxysmal tachycardia can result in the potential for sudden incapacitation and the inability to perform job functions due to limitations of strength or endurance.

(h) History of a congenital abnormality that has been treated by surgery but with residual complications or that has not been treated by surgery, leaving residuals or complications. A congenital abnormality can result in frequent episodes of pain or inability to perform work and the potential for sudden incapacitation.

(i) Chronic pericarditis, endocarditis, or myocarditis. These conditions can result in the inability to perform job functions due to limitations of endurance.

(j) Cardiac pacemaker. If the person is pacemaker-dependent, then the risk for sudden failure due to trauma is not acceptable. Those with cardiac pacemakers can have the potential for sudden incapacitation.

(k) Coronary artery vasospasm. Those with cardiac artery vasospasm can have the potential for sudden incapacitation.

(l) Any other cardiac condition that results in a person not being able to perform as a fire fighter

A-3-7.2.2 Category B medical conditions of the vascular system include the following:

(a) Hypertension that is uncontrolled or poorly controlled, or requires medication likely to interfere with the performance of duties. Acceptable hypertension is a blood pressure less than 180/100 and no target organ damage. Hypertension is a progressive illness leading to functional impairment with the potential for sudden incapacitation.

(b) Peripheral vascular disease, such as Raynaud's phenomenon that interferes with performance of duties or makes the individual likely to have significant risk of severe injury. Peripheral vascular disease can result in frequent episodes of pain or the inability to perform work and the inability to perform functions as a fire fighter due to limitations of endurance.

(c) Recurrent thrombophlebitis. Recurrent thrombophlebitis can result in frequent episodes of pain or the inability to perform work and the inability to perform functions as a fire fighter due to limitations of endurance.

(d) Chronic lymphedema due to lymphopathy or severe venous valvular incompetency. Chronic lymphedema can result in the inability to perform functions as a fire fighter due to limitations of endurance.

(e) Congenital or acquired lesions of the aorta or major vessels, for example, syphilitic aortitis, demonstrable atherosclerosis that interferes with circulation, and congenital acquired dilatation of the aorta. Congenital or acquired lesions of the aorta or major vessels can result in the potential for sudden incapacitation and the inability to perform job functions due to limitations of endurance.

(f) Marked circulatory instability as indicated by orthostatic hypotension, persistent tachycardia, and severe peripheral vasomotor disturbances. Marked circulatory instability can result in the inability to perform job functions due to limitations of endurance and the inability to perform job functions due to limitations of balance.

(g) Aneurysm of the heart or major vessel, congenital or acquired. An aneurysm of the heart or major vessel can result in frequent episodes of pain or inability to perform work and the potential for sudden incapacitation.

(h) Any other vascular condition that results in a person not being able to perform as a fire fighter

A-3-8.1 Chronic, active hepatitis is a Category A medical condition of the abdominal organs and gastrointestinal system. Chronic, active hepatitis can result in frequent episodes of pain or the inability to perform work.

A-3-8.2 Category B medical conditions of the abdominal organs and gasrointestinal system include the following:

(a) Cholecystitis (that which causes frequent pain due to stones or infection). Cholecystitis can result in frequent episodes of pain or the inability to perform work.

(b) Gastritis (that which causes recurrent pain and impairment). Gastritis can result in frequent episodes of pain or the inability to perform work.

(c) Hemorrhoids (where severe symptoms lead to impairment). Hemorrhoids can result in frequent episodes of pain or the inability to perform work.

(d) Acute hepatitis (until resolution of acute hepatitis as determined by clinical examination and appropriate laboratory testing). Acute hepatitis can result in frequent episodes of pain or the inability to perform work.

(e) Hernia (unrepaired inguinal or abdominal hernia that could obstruct during duty). A hernia can result in the potential for sudden incapacitation.

(f) Inflammatory bowel disease (that which causes disabling pain or diarrhea). Inflammatory bowel disease can result in frequent episodes of pain or the inability to perform work. It is a progressive illness leading to functional impairment.

(g) Intestinal obstruction (that is, recent obstruction with impairment). An intestinal obstruction can result in frequent episodes of pain or the inability to perform work and the potential for sudden incapacitation.

(h) Pancreatitis (that is, chronic or recurrent with impairment). Pancreatitis can result in frequent episodes of pain or the inability to perform work.

(i) Resection, bowel (if frequent diarrhea precludes performance of duty). A bowel resection can result in frequent episodes of pain or the inability to perform work.

(j) Ulcer, gastrointestinal (where symptoms are uncontrolled by drugs or surgery). A gastrointestinal ulcer can result in frequent episodes of pain or the inability to perform work.

(k) Cirrhosis, hepatic or biliary (that which is symptomatic or in danger of bleeding). Cirrhosis can result in frequent episodes of pain or the inability to perform work.

(l) Any other gastrointestinal condition that results in a person not being able to perform as a fire fighter.

A-3-9.1.2 Category B medical conditions of the reproductive organs include the following:

(a) Pregnancy. Pregnancy can result in frequent episodes of pain or the inability to perform work; progressive inability to perform work due to limitations of endurance, flexibility, or strength; and the inability to properly wear protective equipment. See Section B-4.4, Reproductive.

(b) Dysmenorrhea that leads to recurrent incapacitation. Dysmenorrhea can result in frequent episodes of pain or the inability to perform work.

(c) Endometriosis, ovarian cysts, or other gynecologic conditions (severe, leading to recurrent incapacitation). Endometriosis, ovarian cysts, and other gynecologic conditions can result in frequent episodes of pain or the inability to perform work.

(d) Testicular or epididymal mass (that which requires medical evaluation). A testicular or epididymal mass can result in frequent episodes of pain or the inability to perform work. This is a progressive illness leading to functional impairment.

(e) Any other genital condition that results in a person not being able to perform as a fire fighter

A-3-9.2.2 Category B medical conditions of the urinary system include the following:

(a) Diseases of the kidney requiring dialysis. Diseases of the kidney can result in frequent episodes of pain or the inability to perform work. Kidney disease is a progressive illness leading to functional impairment.

(b) Diseases of the ureter, bladder, or prostate that require frequent or prolonged treatment. These diseases can result in frequent episodes of pain or the inability to perform work.

(c) Any other urinary condition that results in a person not being able to perform as a fire fighter

A-3-10.2 Category B medical conditions of the spine, scapulae, ribs, and sacroiliac joints include the following:

(a) Arthritis that results in progressive impairment or limitation of movement. Arthritis is a progressive illness that leads to functional impairment. Arthritis can result in the inability to perform functions as a fire fighter due to limitations of endurance or flexibility.

(b) Structural abnormality, fracture, or dislocation that is a progressive or recurrent impairment. These conditions are progressive illnesses leading to functional impairment. These illnesses can result in the inability to perform functions as a fire fighter due to limitations of strength or flexibility.

(c) Nucleus pulposus, herniation of or history of laminectomy (if symptomatic within the last three years). These conditions are progressive illnesses leading to functional impairment and the inability to properly wear protective equipment.

(d) Any other spinal condition that results in a person not being able to perform as a fire fighter

A-3-11.2 Category B medical conditions of the extremities include the following:

(a) Limitation of motion of a joint of a degree to interfere with successful and safe performance of fire-fighting duties. The limitation of motion of a joint can result in the inability to perform functions as a fire fighter due to limitation of flexibility.

(b) Amputation or deformity of a joint or limb of a degree to interfere with successful and safe performance of fire-fighting duties. The amputation or deformity of a joint or limb can result in the inability to perform functions as a fire fighter due to limitations of strength and/or balance.

(c) Dislocation of a joint (that is, recurrent or with residual limitation of motion of a degree to interfere with successful and safe performance of fire-fighting duties; successful

surgery for recurrent shoulder dislocation, if range of motion is intact, would not exclude a person). Dislocation of a joint can result in the inability to perform functions as a fire fighter due to limitations of strength or flexibility.

(d) Joint reconstruction, ligamentous instability, or joint replacement (in cases where recurrent or with residual limitation of motion of a degree to interfere with successful and safe performance of fire-fighting duties; surgery for a torn anterior cruciate ligament could disqualify if quadriceps strength is not normal or if the knee is lax or develops pain or swelling when stressed.) These conditions of the joint can result in the inability to perform functions as a fire fighter due to limitations of strength or flexibility.

(e) Chronic osteoarthritis or traumatic arthritis (in cases where recurrent exacerbations leads to impairment). Chronic osteoarthritis or traumatic arthritis can result in frequent episodes of pain or the inability to perform work and the inability to perform functions as a fire fighter due to limitations of strength, endurance, or flexibility.

(f) Inflammatory arthritis (in cases where severe recurrent or progressive illness or with deformity or limitation of range of motion of a degree to interfere with successful and safe performance of fire-fighting duties). Inflammatory arthritis can result in frequent episodes of pain or the inability to perform work and the inability to perform functions as a fire fighter due to limitations of strength, endurance, or flexibility.

(g) Any other extremity condition that results in a person not being able to perform as a fire fighter.

A-3-12.1 Category A medical conditions of neurological nature include the following:

(a) Ataxias of heredo-degenerative type. Ataxias of heredo-degenerative type can result in the inability to perform functions as a fire fighter due to limitations of balance.

(b) Cerebral arteriosclerosis as evidenced by documented episodes of neurological impairment. Cerebral arteriosclerosis can result in the inability to perform functions as a fire fighter due to limitations of strength and/or balance.

(c) Multiple sclerosis with activity or evidence of progression within previous three years. Multiple sclerosis can result in the inability to perform functions as a fire fighter due to limitations of strength or flexibility.

(d) Progressive muscular dystrophy or atrophy. This condition can result in the inability to perform functions as a fire fighter due to limitations of strength and/or balance.

(e) Epileptic conditions. After a provoked seizure, with the precipitant identified and alleviated, with subsequent normal CT or MRI scan, normal EEG, normal neurological exam, free of recurrence without medication for one year, and with definitive statement from a qualified neurological specialist, a fire fighter can be cleared to return to duty.

A-3-12.2 Category B medical conditions of neurological nature include the following:

(a) Congenital malformations (that is, severe vascular malformations that interfere with the ability to wear protective equipment). Congenital malformations can result in the inability to properly wear protective equipment.

(b) Migraine (that is, recurrent, with impairment uncontrolled). Migraines can result in frequent episodes of pain or the inability to perform work.

(c) Clinical disorders with paresis, paralysis, dyscoordination, deformity, abnormal motor activity, abnormality of sensation, or complaint of pain (progressive or severe). These disorders are progressive illnesses leading to functional impairment. They can result in the inability to perform functions as a fire fighter due to limitations of strength, flexibility, or balance.

(d) Subarachnoid or intracerebral hemorrhage, verified either clinically or by laboratory studies, except for those corrected with verification by laboratory studies and report of treating physician. Subarachnoid or intracerebral hemorrhage is a progressive illness leading to functional impairment. This illness can result in the potential for sudden incapacitation.

(e) Abnormalities from recent head injury such as severe cerebral contusion or concussion. The abnormalities can result in the potential for sudden incapacitation.

(f) Any other neurological condition that results in a person not being able to perform as a fire fighter

A-3-13.2 Category B medical conditions of the skin include the following:

(a) Acne or inflammatory skin disease (if condition precludes good fit of protective equipment such as SCBA face piece or prevents shaving). Acne or inflammatory skin disease can result in the inability to properly wear protective equipment.

(b) Eczema (if broken skin results in impairment from infections or pain or interferes with seal between skin and personal protective equipment). Eczema can result in frequent episodes of pain or the inability to perform work.

(c) Any other dermatologic condition that results in the person not being able to perform as a fire fighter

A-3-14.1 Category A medical conditions of blood and blood-forming organs includes the following:

(a) Hemorrhagic states requiring replacement therapy (for example, von Willebrand's disease, thrombocytopenia, hemophilia). These hemorrhagic states can result in frequent episodes of pain or the inability to perform work.

(b) Sickle cell disease (homozygous). Sickle cell disease can result in frequent episodes of pain or the inability to perform work and the potential for sudden incapacitation.

A-3-14.2 Category B medical conditions of blood and blood-forming organs include the following:

(a) Anemia (in cases that require regular transfusions). Anemia can result in frequent episodes of pain or the inability to perform work. Anemia is a progressive illness leading to functional impairment.

(b) Leukopenia (where chronic and indicative of serious illness). Leukopenia is a progressive illness leading to functional impairment.

(c) Polycythemia vera (where severe, requiring treatment). Polycythemia vera can result in frequent episodes of pain or the inability to perform work and the potential for sudden incapacitation.

(d) Splenomegaly (where the spleen is susceptible to rupture from blunt trauma). Splenomegaly can result in the potential for sudden incapacitation.

(e) History of thromboembolic disease (that is, more than one episode, underlying condition). A history of thromboembolic disease can result in the potential for sudden incapacitation.

(f) Any other hematological condition that results in a person not being able to perform as a fire fighter.

A-3-15.1 Category A medical conditions of endocrine and metabolic disorders include diabetes mellitus that is treated with insulin or an oral hypoglycemic agent and with a history of one or more episodes of incapacitating hypoglycemia. Diabetes mellitus can result in the potential for sudden incapacitation.

A-3-15.2 Category B medical conditions of endocrine and metabolic disorders includes the following:

(a) Diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance (that is, symptomatic and poorly controlled). These diseases can result in frequent episodes of pain or the inability to perform work, and the potential for sudden incapacitation.

(b) Nutritional deficiency disease or metabolic disorder (where clinically significant and not correctable by replacement therapy or other medication). Nutritional deficiency disease or metabolic disorder can result in frequent episodes of pain or the inability to perform work.

(c) Diabetes mellitus requiring treatment with insulin or oral hypoglycemic agent. Diabetes mellitus can result in episodes of pain or inability to perform work. It is a progressive illness leading to functional impairment and can result in the potential for sudden incapacitation.

(d) Any other endocrine or metabolic condition that results in a person not being able to perform as a fire fighter

A-3-16.2 Category B medical conditions of systemic diseases and miscellaneous conditions include the following:

(a) Connective tissue disease, such as dermatomyositis, lupus erythematosus, scleroderma, and rheumatoid arthritis (where manifested by systemic impairment or limitations of motion). These connective tissue diseases are progressive illnesses leading to functional impairment and the inability to function as a fire fighter due to limitations of strength or flexibility.

(b) Residuals from past thermal injury (for example, frostbite resulting in significant symptomatic discomfort). Residuals from past thermal injury may result in the inability to perform functions as a fire fighter due to limitations of strength, endurance, or flexibility.

(c) Documented evidence of a predisposition to heat stress with recurrent episodes or resulting residual injury. A predisposition to heat stress can result in the potential for sudden incapacitation and the inability to perform functions as a fire fighter due to limitations of endurance.

(d) Any other systemic condition that results in a person not being able to perform as a fire fighter.

A-3-17.2 Category B medical conditions of tumors and malignant diseases can include the following:

(a) The medical evaluation of any person with malignant disease that is newly diagnosed, untreated, or currently being treated will be deferred.

Any person with treated malignant disease should be evaluated based on that person's current physical condition and on the likelihood of that person's disease to recur or progress.

(b) Any other tumor or similar condition that results in a person not being able to perform as a fire fighter

A-3-18.2 Category B medical conditions of a psychiatric nature include the following:

(a) Any person with a history of a psychiatric condition or substance abuse problem should be evaluated based on that person's current condition. Psychiatric conditions and substance abuse problems can result in frequent episodes of pain or the inability to perform work and the potential for sudden incapacitation. These conditions are progressive illnesses leading to functional impairment.

(b) Any other psychiatric condition that results in a person not being able to perform as a fire fighter

A-3-19.2 Category B medical conditions concerning chemicals, drugs, and medications include the following:

(a) Anticoagulant agents — for example, coumadin — if the anticoagulated state is controlled such that the prothrombin time or INR has been in the therapeutic range for at least one month and that no other coexisting conditions would either contribute to a bleeding diathesis or by themselves preclude certification for full duty. Anticoagulant agents can result in frequent episodes of pain or the inability to perform work as well as the potential for sudden incapacitation.

(b) Cardiovascular agents (for example, antihypertensives). Cardiovascular agents can result in frequent episodes of pain or the inability to perform work as well as the potential for sudden incapacitation.

(c) Narcotics. The use of narcotics can result in frequent episodes of pain or the inability to perform work as well as the potential for sudden incapacitation.

(d) Sedative-hypnotics. The use of sedative-hypnotics can result in frequent episodes of pain or the inability to perform work as well as the potential for sudden incapacitation.

(e) Stimulants. The use of stimulants can result in frequent episodes of pain or the inability to perform work as well as the potential for sudden incapacitation.

(f) Psychoactive agents. The use of psychoactive agents can result in frequent episodes of pain or the inability to perform work as well as the potential for sudden incapacitation.

(g) Steroids. The use of steroids can result in frequent episodes of pain or the inability to perform work.

(h) Any other chemical, drug, or medication that results in a person not being able to perform as a fire fighter

Appendix B Guide for Fire Department Physicians

This appendix is not a part of the requirements of this NFPA document but is included for informational purposes only.

B-1 Introduction. This information is designed to help physicians implement the requirements of this standard. The appendix includes sections on the occupational health risks for fire fighters, organization of a medical program for fire fighters, guidance for conducting the examinations, and further information on medical conditions that might cause difficulties when implementing this standard.

The medical conditions outlined in Chapter 2 apply to individuals conducting essential fire-fighting functions. *(See Appendix C.)* The application of these guidelines to individuals with other fire department jobs requires a careful consideration of the job duties of these other individuals and the medical conditions that might affect a person's ability to conduct those duties.

B-2 Occupational Safety and Health Problems for Fire Fighters. Fire fighting and emergency response are very difficult jobs. People in these jobs perform functions that are physically and psychologically very demanding. These functions are

often performed under very difficult conditions. *(See Appendix C.)* Studies have shown that fire-fighting functions require working at near maximal heart rates for prolonged periods of time. Heavy protective equipment (including respirators) and the heat from the fire contribute to this physical load.

Fire fighters and emergency response personnel also are exposed to many toxic substances during their work. Carbon monoxide is the most common contaminant; studies have shown individual exposures as high as 5000 ppm in actual fires. Other significant exposures common in fires include cyanide, acrolein, hydrogen chloride, nitrogen dioxide, and benzene. The burning of plastics and other synthetic materials can expose fire fighters to other toxic materials such as isocyanates and nitrosamines. Hazardous materials incidents can involve exposures to many other toxic materials. While the use of respirators helps to reduce exposures, mechanical, environmental, and behavioral factors can limit their use during all phases of a fire.

The available health data on fire fighters are limited. While the protection for fire fighters has improved over the last several years, exposures might be changing due to the introduction of more synthetic materials. Given the delay between exposure and onset, that is latency, of many occupational illnesses, current or past health studies of fire fighters might not reflect future health risks. These limitations should be recognized when reviewing the available studies.

Available data indicate that fire fighters have increased risk for injuries, pulmonary disease, cardiovascular disease, cancer, and noise-induced hearing loss. The increased risk for injuries is expected, given the demands and circumstances for this work. Fatalities and serious injuries from burns or other fire scene hazards can occur.

The risk for respiratory disease occurs due to the respiratory damage caused by many of the components of fire smoke, for example, particulate, acrolein, nitrogen oxides, and so on. Acute reductions in pulmonary function and even hypoxemia are not uncommon after fires, even in asymptomatic fire fighters. Permanent damage from smoke inhalation has also been reported. Studies of chronic pulmonary changes from fire fighting have not had consistent results. Some follow-up studies have shown a greater rate of decline in pulmonary function among fire fighters over time while others have not been able to detect this change. Increased use of protective equipment and job selection factors (ill fire fighters transferring to other duties) could account for these inconsistent findings.

The strenuous work demands of fire fighting combined with exposures to carbon monoxide and other toxic substances can increase the risk for cardiovascular disease among fire fighters. Acute respiratory changes also can stress the cardiovascular system. This increased cardiovascular disease risk has been documented even in some mortality studies despite the job selection factors that tend to mask any increase when compared to the general population. Other studies have not detected this risk. Certainly, the combination of the physical stress of fire fighting and exposures for a person with preexisting coronary heart disease would be expected to increase the risk of a myocardial infarction or other acute event. However, the degree of this acute risk and whether fire fighting also contributes to the development of coronary heart disease is uncertain.

Increased cancer risk for fire fighters has been found in several recent studies. While not totally consistent, these studies generally show an increased risk of brain cancer, gastrointestinal cancers, and leukemia among fire fighters in many different parts of the world. Increased incidence of other cancer sites has also been shown in some studies. Several studies are currently under way to further evaluate this risk.

Noise-induced hearing loss has now been documented in several studies of fire fighters. Fire fighters might also be at risk from other specific exposures including infectious diseases and liver, kidney, or neurological damage from exposure to specific chemicals.

B-3 Guidance for Medical Evaluations.

B-3.1 Preplacement and Base Line Medical Evaluations. Preplacement medical evaluations assess an individual's health status before assignment to a position. The purpose of the evaluation is to ascertain whether the individual has any health condition that prevents him or her from performing the job, including the ability to wear protective equipment required for the job. The evaluation should also identify any health problems that could be substantially aggravated by the physical demands and working conditions. Base line medical information concerning the applicant's health status can then be compared to subsequent evaluation results for the purpose of determining whether the individual has any significant health trends that can be occupationally related.

Two types of information are essential for a medical preplacement evaluation for those performing fire fighter duties. First, the physician must understand the working conditions and physical demands of this occupation. Appendix C provides a list of the environmental factors encountered in fire fighting and emergency response. The physician also should obtain additional information from the fire department regarding specific job duties and task lists, if the fire department has conducted a validation study or job analysis, and should be familiar with the organization of the fire department. For the evaluation of some medical conditions, the physician will need to obtain further information about specific job duties in order to make a determination. This might require on-site inspections and consultation with fire department personnel.

Second, the physician needs to have accurate information about the person's disease or medical condition, the functional limitations associated with that condition, and an understanding of how physical demands and working conditions would impact on that condition. An accurate diagnosis is often the key factor in determining the person's capability. For example, different skin diseases can have similar clinical appearances but can markedly differ in their response to environmental exposures. The physician should also recognize that individual variability can exist between persons with the same clinical condition.

Upon completion of the examination, the physician should inform the authority having jurisdiction if the applicant is medically qualified to perform as a fire fighter.

B-3.2 Periodic Medical Evaluations. The periodic medical evaluation is designed to evaluate the person's continued ability to perform his or her duties and to detect any other significant changes in the condition of his or her health. The latter includes possible job-related changes or abnormalities.

Every year, each fire fighter will be medically evaluated by the fire department physician. This medical evaluation

includes an update on the fire fighter's medical history, including any significant changes, a brief review of symptoms, and a report on any significant job-related exposures experienced during the past year. Height, weight, visual acuity, and blood pressure are measured and recorded. The extent of the medical evaluation and additional testing will depend on the fire fighter's medical condition.

A more thorough evaluation, including a medical examination, is conducted on a periodic basis. For individuals less than 30 years of age, the medical evaluation and examination is conducted every three years; for those 30 to 39, every two years; and for those 40 or over, every year. This evaluation should include an updated medical and interval history, complete physical examination, vision testing, audiometry, pulmonary function testing, and a CBC, urinalysis, and blood biochemistry (SMA).

The use of chest X-rays in surveillance activities in the absence of significant exposures, symptoms, or medical findings has not been shown to reduce respiratory or other health impairment. Therefore, only preplacement chest X-rays are recommended.

No firm guidelines for stress electrocardiography in asymptomatic individuals have been developed. There have been problems with false-positive results from this testing, especially in younger age groups and in women. In those with one or more risk factors for coronary artery disease, there is probably justification for performing the testing. As well, stress tests are more important in those whose work deals with public safety.

A reasonable approach is to start periodic treadmill testing on fire fighters at age 40. In those with one or more coronary artery disease risk factors [premature family history (less than age 55), hypertension, diabetes mellitus, cigarette smoking, and hypercholesterolemia (total cholesterol greater than 240 or HDL cholesterol less than 35)], testing should be started by age 35. The frequency of testing should increase with age, but at the minimum the test should be done at least every two years. Testing can also be done as indicated for those with symptoms suggestive of coronary artery disease as reported in their yearly medical histories or interim reports.

B-3.3 Content of the Medical Evaluation.

B-3.3.1 Medical and Occupational History. The medical history should cover the person's known health problems, such as major illnesses, surgeries, medication use, allergies, etc. Symptom review is also important for detecting early signs of illness. In addition, a comprehensive medical history should include a personal health history, a family health history, a health habit history, an immunization history, and a reproductive history. An occupational history should also be obtained to collect information about the person's past occupational and environmental exposures.

B-3.3.2 Medical Examination. The medical examination includes the following organ systems and tests:

(a) Vital signs, such as pulse, respiration, blood pressure, and, if indicated, temperature
(b) Dermatological
(c) Ears, eyes, nose, mouth, throat
(d) Cardiovascular
(e) Respiratory
(f) Gastrointestinal
(g) Genitourinary
(h) Endocrine and metabolic
(i) Musculoskeletal
(j) Neurological
(k) Audiometry
(l) Visual acuity and peripheral vision testing
(m) Pulmonary function testing
(n) Laboratory testing, if indicated
(o) Diagnostic imaging, if indicated
(p) Electrocardiography, if indicated

B-3.3.2.1 Laboratory Tests. CBC, biochemical test battery (SMA), and urinalysis should be conducted for detecting specific illnesses as well as developing a baseline for later comparison.

B-3.3.2.2 X-rays. A baseline chest X-ray can be helpful for individuals with a history of respiratory health problems or symptoms. For others, it can be useful for later comparison.

B-3.3.2.3 Pulmonary Function Testing. Pulmonary function testing can be helpful for individuals with a history of respiratory health problems and as a baseline for later comparison. A baseline test should be administered by an experienced person. 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).

B-3.3.2.4 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 1910.95).

B-3.3.2.5 Electrocardiography. Baseline electrocardiography should be conducted.

B-3.4 Reporting the Results of the Medical Evaluation. All individuals participating in a medical evaluation should be informed ahead of time about the purpose of the medical evaluation and the content of the exam. The results of any medical evaluation are considered to be confidential medical information subject to customary patient-physician confidentiality restrictions. Under most circumstances, results and recommendations arising from the evaluation should be expressed in general terms without specific diagnostic information. In cases where more specific information is needed in order to make a decision on the status of a candidate or fire fighter, a specific consent form releasing that information should be obtained from the candidate or fire fighter. Blanket or general "release of medical information" forms should not be used.

In most cases, a simple statement will suffice:

> Based on the results of the preplacement medical evaluation of December 10, 1996, Jane Doe is (or is NOT) medically certified to engage in training and emergency operations for Anytown Fire Department.
>
> OR
>
> Based on the results of the preplacement medical evaluation of December 10, 1996, John Doe is NOT medically certified to engage in training and emergency operations for Anytown Fire Department. He has been advised of the medical reasons for this recommendation and of the policies and procedures available to him if he disagrees with the results of the medical evaluation.

B-3.5 Second Opinions. Fire department policies and procedures should allow for a medical "second opinion" when a candidate or fire fighter disagrees with the results or recommendations of a medical examination conducted by the fire department physician or when the fire department physician is uncertain about the limitations or prognosis of the individual's condition. Often other physicians will not be familiar with the duties and demands of fire fighting and emergency response. When possible, the fire department physician should help educate the other physician about how the individual's condition could affect or be affected by fire fighting. If there is still disagreement about the condition or placement recommendation, a third physician (acceptable to both the fire department and the candidate) can be consulted.

B-3.6 Musculoskeletal System. Some of the injuries or problems encountered in this system will need functional capacity evaluation to determine fitness for duty. Physical therapy providers often design tests for employers to determine ability to perform tasks similiar to those required as part of their essential job functions. These tests should be based on direct measurements of the actual job functions. These functional capacity evaluations can be especially useful when a fire fighter has been cleared for full duty by a physician who is not familiar with the essential job functions of a fire fighter.

B-4 Specific Medical Conditions.

B-4.1 Diabetes Mellitus. The major concern for diabetic fire fighters is the risk of becoming hypoglycemic during fireground operations or other emergency responses. Both exogenous insulin and oral hypoglycemic agents can be associated with episodes of hypoglycemia that can rapidly progress from impaired judgment to unconsciousness. The most reliable predictor of hypoglycemia is a history of it. In one study of insulin-dependent adolescents conducted at the Joslin Clinic (Bhatia and Wolfsdorf 1991), all 196 patients experienced hypoglycemia at least once during the two-year observation period. Of these, 15 percent were classified as severe, based on loss of consciousness, seizure, or the clinical need for therapeutic glucagon or intravenous glucose. It was particularly concerning that 24 percent of hypoglycemic episodes detected by blood glucose monitoring were inapparent to the patients. The probable causes of hypoglycemia were identified in 71 percent of cases, and the most common were strenuous exercise and skipped meals or snacks. Both of these precipitants are likely to occur in emergency responders, especially fire service personnel. In addition to accelerating glucose utilization, strenuous exercise increases insulin sensitivity (Wasserman and Sinman 1994). With the tighter glycemic control that is now known to decrease and delay onset of diabetic complications, there is a concomitantly increased likelihood of exercise-induced hypoglycemia (Wasserman and Sinman 1994).

Insulin is clearly associated with a much higher risk of symptomatic hypoglycemia than are oral agents. In the absence of a history of incapacitating hypoglycemic episodes, and with close medical monitoring, there is probably no reason to exclude fire fighters who are taking oral hypoglycemic agents, as long as they have stable weights, diets, and renal function. Although the Americans with Disabilities Act (Public Law 101-336 1990) does not appear to require each diabetic patient to be evaluated for fitness for duty individually, there is some case law that disallowed blanket exclusion of insulin-dependent diabetics from public safety positions (*Fire & Police Personnel Reporter* 1994). The Federal Aviation Administration (14 CFR 67.13–16 1995) does not grant medical certificates to diabetics treated with insulin and severely limits those on oral hypoglycemic agents.

References

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2. Wasserman, D. H., and B. Sinman. 1991. "Exercise in Individuals with IDDM." *Diabetic Care*17:924.

3. Public Law 101-336. 1990. Title I – Employment.

4. *Fire & Police Personnel Reporter*. November 1994, 169.

5. 14 CFR 67.13-16. January 1995.

B-4.2 Asthma and Reactive Airways Disease. The diagnosis of asthma and related airway hyperactivity disorders is often confounded by definitional issues. For the purposes of fire fighter certification, a variety of airway disorders that meet the following criteria can be included. "Asthma is a chronic inflammatory disorder of the airways. In susceptible individuals, this inflammation causes symptoms that are usually associated with widespread but variable airflow obstruction that is often reversible, either spontaneously or with treatment, and causes an associated increase in airway responsiveness to a variety of stimuli."

Since asthma is a highly prevalent disease, a number of fire fighter applicants will require special evaluation. Combustion products, exercise, and cold air are all potent provokers of an asthma attack. Some of these exposures are unavoidable, even with SCBA use. If a candidate has a diagnosis or symptoms consistent with an asthma-like disease, many factors will need to be considered. An asthma attack during a suppression activity could harm the fire fighter, his fellow fire fighters, or a member of the public.

The following factors can be used to help in certification: The persistence of airway obstruction between attacks (as measured by spirometry); the need and frequency of steroid and bronchodilator use (frequent bronchodilator use suggests persistent airway hyperactivity); the usual type of triggers in the applicant (allergic, infectious, exercise induced, etc.); the history of hospitalization, emergency room, or urgent treatment; the length of time between attacks; nocturnal symptoms and other estimates of airway instability.

Moderate asthma or worse could disqualify an individual for fire fighter duties. Unknown factors such as the suppression of airway hyperactivity with anti-inflammatory medications to reduce the possibility of a sudden or severe attack are under investigation and could modify current suggestions.

B-4.3 Heart Disease. The medical conditions relating to the cardiovascular system have been reviewed since the previous edition (1992) of this document. The task forces at the Bethesda Conference published recommendations for athletes competing with cardiovascular disease in the *Journal of American Cardiac Care* in October 1994. The analysis used by the task force has relevance to the evaluation of fire fighters with cardiovascular disease. Fire-fighting activities have a high static component (i.e., inducing predominantly an increase in blood pressure) and a moderate to high dynamic component (i.e., inducing predominantly an increase in heart rate). Sports having a similar set of demands include wrestling, body building, and boxing. Recommendations made by the task force with respect to athletic activities that have these physical demands (high static, moderate dynamic) have been followed in this document.

B-4.4 Reproductive. Exposures in the fire-fighting environment can cause adverse reproductive effects for both males and females. Medical evidence exists to indicate that chemical exposure, heat, noise, and physical exertion can affect various endpoints of reproductive health including fertility, fetal loss, and growth parameters of the offspring. All candidates and fire fighters should be educated about these risks and about the need to take appropriate steps to limit their exposures.

Also, there could be some situations where a male or female fire fighter is attempting to conceive a child and is having difficulty. In these situations, where a complete medical evaluation has not identified another cause for this infertility, temporary assignment on a voluntary basis to alternative duty or a leave of absence should be considered.

Medical evidence exists that certain toxic substances or conditions that are present in the fire-fighting environment are dangerous to the safety and well-being of the fetus. Therefore, it is important to educate all fire fighters about these risks and the reasons for recommending that pregnant fire fighters restrict their fire-suppression activities. For example, there is good evidence that the fetus is especially sensitive to carbon monoxide, a known significant component of fire smoke. Although the use of SCBA is assumed to be protective, sometimes such equipment is not used throughout a fire suppression or hazardous materials incident. The use of such equipment also increases other fetal stressors, such as exertion and heat. Other concerns are those involving physical work. Prolonged standing, heavy lifting, and exposures to temperature extremes and humidity have been related to an increase of preterm and low birth weight infants. Because the fetus should be protected from these exposures at the earliest possible time, the fire fighter who might be pregnant should obtain early pregnancy testing. Recognizing potential risks to the fetus from the fire-fighting environment is a relatively recent event, and many fire fighters might not be aware of these risks.

Based on a recent U.S. Supreme Court decision (*International Union et al. v. Johnson Controls, Inc.,* 59 U.S.L.W. 4209, March 20, 1991), the ability to perform as a fire fighter is to be the basis for the medical certification without consideration of health risks to the fetus. However, the pregnant fire fighter should be counseled of the potential risks to her fetus due to her exposures during fire-fighting duties.

Any fire fighter who becomes pregnant should be offered the opportunity at any time during the pregnancy to be voluntarily removed from fire-fighting duties and from other duties involving the hazards or physical stress that might endanger the fetus. If practical, the fire fighter should be offered voluntarily reassignment to an alternative position. At such time as the pregnant fire fighter can no longer be medically certified as being capable of performing fire-fighting duties, the fire fighter should be reassigned to other duties. At such time as the fire fighter is no longer pregnant, the fire fighter should be reinstated to the position held prior to being pregnant. Nursing fire fighters should also be advisedabout the potential exposures to their infants.

B-4.5 Noise-Induced Hearing Loss. This category can pose difficulties because a high percentage of current fire fighters have noise-induced hearing loss due to their exposures as fire fighters. Implementation of hearing conservation programs and programs to reduce noise exposures should lead to a decrease in the prevalence of this condition in the future.

B-4.6 Seizures and Epilepsy. It is important to distinguish between a history of seizures and epilepsy. As much as 10 percent of the population will experience at least one seizure in a lifetime, whereas less than 1 percent of the population qualifies for a diagnosis of epilepsy (Hauser and Hesdorffer 1990). Many conditions producing seizures in the pediatric age group are known to remit prior to adulthood, and many adults sustain a reactive seizure that can be attributed to a reversible, underlying precipitant. These circumstances do not necessarily represent an ongoing risk of sudden, unpredictable incapacitation of a fire fighter. If a fire fighter has a single seizure, a clear precipitant not associated with central nervous system damage is identified and eliminated, and the individual has no recurrence over the ensuing year, then he or she is probably not more likely to have another seizure than the rest of the general population (Spencer 1995). Most fire department physicians will want a qualified neurologist to verify that an individual with a history of seizures does not, in fact, have epilepsy.

Epilepsy is diagnosed by the presence of "unprovoked, recurrent seizures — paroxysmal disorders of the central nervous system characterized by an abnormal cerebral neuronal discharge with or without loss of consciousness" (Cascino 1994). Treatment of patients with epilepsy is only variably successful, with roughly 40 percent of patients attaining remission on anti-convulsant therapy (Hauser and Hesdorffer 1990; Spencer 1995). Remission is defined as five years without recurrence of seizure activity (Annegers, Hauser, and Elveback 1979). Further complicating the fitness-for-duty issue is the fact that only 50 percent of patients who achieve remission do so without toxic side effects of theanti-convulsant drug (Cascino 1994).

Partial, simple epilepsy, or recurrent seizures that do not impair consciousness, are felt to be a disqualifying condition because of the uncertainty regarding how much of the brain might be involved, and the risk of propagation to other regions of the brain, particularly in the highly epileptogenic environment of the fireground (Spencer 1995).

This standard is somewhat more liberal than that promulgated by the Federal Aviation Administration of the U.S. Department of Transportation for aircraft pilots (14 CFR 67.13–16 1995). All epileptics, regardless of therapeutic success are denied First, Second, or Third class medical certificates, except under the provisions of 14 CFR 67.19, *Special Issue of Medical Certificates.*

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Appendix C Essential Fire-Fighting Functions

This appendix is not a part of the requirements of this NFPA document but is included for informational purposes only.

The medical requirements in this standard were based on in-depth consideration of essential fire-fighting functions. These essential functions are what fire fighters are expected to perform at emergency incidents and are derived from the performance objectives stated in NFPA 1001, *Standard on Fire Fighter Professional Qualifications.*

Such essential functions are performed in and affected by the following environmental factors:

(a) Operate both as a member of a team and independently at incidents of uncertain duration

(b) Spend extensive time outside exposed to the elements

(c) Tolerate extreme fluctuations in temperature while performing duties. Must perform physically demanding work in hot (up to 400°F), humid (up to 100 percent) atmospheres while wearing equipment that significantly impairs body-cooling mechanisms.

(d) Experience frequent transition from hot to cold and from humid to dry atmospheres

(e) Work in wet, icy, or muddy areas

(f) Perform a variety of tasks on slippery, hazardous surfaces such as on rooftops or from ladders

(g) Work in areas where sustaining traumatic or thermal injuries is possible

(h) Face exposure to carcinogenic dusts such as asbestos, toxic substances such as hydrogen cyanide, acids, carbon monoxide, or organic solvents either through inhalation or skin contact

(i) Face exposure to infectious agents such as hepatitis B or HIV

(j) Wear personal protective equipment that weighs approximately 50 lb while performing fire-fighting tasks

(k) Perform physically demanding work while wearing positive pressure breathing equipment with 1.5 in. of water column resistance to exhalation at a flow of 40 l/min

(l) Perform complex tasks during life-threatening emergencies

(m) Work for long periods of time, requiring sustained physical activity and intense concentration

(n) Face life-or-death decisions during emergency conditions

(o) Be exposed to grotesque sights and smells associated with major trauma and burn victims

(p) Make rapid transitions from rest to near-maximal exertion without warm-up periods

(q) Operate in environments of high noise, poor visibility, limited mobility, at heights, and in enclosed or confined spaces

(r) Use manual and power tools in the performance of duties

(s) Rely on senses of sight, hearing, smell, and touch to help determine the nature of the emergency, maintain personal safety, and make critical decisions in a confused, chaotic, and potentially life-threatening environment throughout the duration of the operation

Appendix D Guide for Fire Department Administrators

This appendix is not a part of the requirements of this NFPA document but is included for informational purposes only.

D-1 Legal Considerations in Applying the Standard. The consideration of an application or continued employment of a fire fighter based on medical or physical performance evaluations involves a determination that is not without legal implications. To this end, prior to making an adverse employment decision based on the foregoing standard, the authority with jurisdiction might wish to consult with counsel.

(a) *Individuals with Handicaps or Disabilities.* The Rehabilitation Act of 1973, as amended, 29 U.S.C. 791 et seq., and implementing regulations, prohibit discrimination against those with handicaps or disabilities under any program receiving financial assistance from the federal government. The Americans with Disabilities Act of 1990, 42 U.S.C. ¤ 12101, et seq., also prohibits employment discrimination by certain private employers against individuals with disabilities. In addition, many states have enacted legislation prohibiting discrimination against those with handicaps or disabilities. These laws prevent the exclusion, denial of benefits, refusal to hire or promote, or other discriminatory conduct against an individual based on a handicap or disability, where the individual involved can, with or without reasonable accommodation, perform the essential functions of the job without creating undue hardship on the employer or program involved. Application of this standard should be undertaken with these issues in mind.

The medical requirements of the 1992 edition of this standard were initially developed and found to be job-related by a subcommittee comprised of medical doctors, physiological specialists, and fire service professionals, as processed through the NFPA consensus standards-making system. Changes for the current edition have been proposed by a task group comprised of similar expertise. The standard provides, to the extent feasible, that decisions concerning those with medical ailments, handicaps, or disabilities be made after case-by-case medical evaluations. Thus, most medical conditions have been assigned to Category B.

The medical requirements in this edition of the standard were revised based on the critical core fire-fighting functions contained in Appendix C. It is recognized that some fire-fighting functions and tasks can vary from location to location due to differences in department size, functional and organizational differences, geography, level of urbanization, equipment utilized, and other factors. Therefore, it is the responsibility of each individual fire department to document, through job analysis, that the critical core fire-fighting functions performed in the local jurisdiction are substantially similar to those contained in Appendix C.

There are a wide variety of job analytic techniques available to document the essential functions of the job of fire fighter. However, at a minimum, any method utilized should be current, in writing, and meet the provisions of the Americans with Disabilities Act [29 CFR 1630.2(n)(3)]. Job descriptions should focus on critical and important work behaviors and specific tasks and functions. The frequency and/or duration of task performance, and the consequences of failure to perform the task should be specified. The working conditions and environmental hazards in which the work is performed should be described.

The job description (examples found in Appendix E) should be made available to the fire service physician for use during the preplacement medical examination for the individual determination of the medical suitability of applicants for fire fighter.

(b) *Anti-Discrimination Laws.* Finally, the user of this standard should be aware that, while courts are likely to give considerable weight to the existence of a nationally recognized standard such as NFPA 1582, *Standard on Medical Requirements for Fire Fighters* [e.g., *Miller v. Sioux Gateway Fire Department,* 497 N.W.2d 838 (1993)], reliance on the standard might not alone be sufficient to withstand a challenge under the anti-discrimination laws. Even in the case of category A medical conditions, courts can still require additional expert evidence concerning an individual candidate or fire fighter's inability to perform the essential functions of the job. Until the courts provide further guidance in this developing area of law, some uncertainty as to the degree and nature of the evidence required to establish compliance with the anti-discrimination laws will remain.

(c) *Individuals Who Are Members of Protected Classes (Race, Sex, Color, Religion, or National Origin).* Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. 2000e, and implementing regulations by the Equal Employment Opportunity Commission (EEOC) prohibit discrimination in employment on the basis of race, sex, color, religion, or national origin (i.e., protected classes).*Additionally, many states, cities, and localities have adopted similar legislation. Generally, physical performance or other requirements that result in "adverse impact" on members of a protected class (e.g., on the basis of gender) are required to be validated through a study in accordance with EEOC guidelines, if such requirements are to be relied on in making employment decisions. Under EEOC guidelines, a study validating employment standards in one jurisdiction can be transportable to another jurisdiction (and therefore used in lieu of conducting a separate study). However, specific preconditions must be met in this regard, and the authority having jurisdiction should seek the advice of counsel before relying on a transported validation study.

(d) *Pregnancy and Reproductive.* Federal regulations, as well as many court decisions (including the U.S. Supreme Court's decision in *International Union, et al. v. Johnson Controls, Inc.,* 499 U.S. 187, 111 S.Ct. 1196 (1991), have interpreted the requirements of Title VII with respect to pregnancy and reproduction. The authority having jurisdiction should seek the advice of counsel in resolving specific questions concerning these requirements as well as other requirements that can be imposed by state or local laws.

D-2 Choosing a Fire Department Physician. Several factors should be considered in choosing a fire department physician. There are relatively few physicians with formal residency training and certification in occupational medicine. The fire department physician shall be qualified to provide professional expertise in the areas of occupational safety and health as they relate to emergency services. For the purpose of conducting medical evaluations, the fire department physician shall understand the physiological and psychological demands placed on fire fighters and shall understand the environmental conditions under which fire fighters must perform.

Therefore, physicians with other specialties need to be considered. The background and experience of the physician should be considered. Knowledge of occupational medicine and experience with occupational health programs obviously would be helpful.

The physician must be committed to meeting the requirements of the program including appropriate record keeping. His/her willingness to work with the department to continually improve the program is also important. Finally, his/her concern and interest in the program and in the individuals in the department is vital.

There are many options for obtaining physician services. They could be paid on a service basis or through a contractual arrangement. For volunteer departments, local physicians might be willing to volunteer their services for the program with additional arrangements to pay for laboratory testing, X-rays, etc. Some departments might want to utilize a local health care facility for their care. However, in that case, the department should be sure to have one individual physician responsible for the program, record keeping, etc. In some cases it could be possible to have the medical examination by the fire department physician, yet have some of the associated costs defrayed by the fire fighter's own health insurance. For example, the health insurance provider might allow the fire fighter to have a yearly physical, normally performed by the fire fighter's personal physician. The health care insurance provider can allow that physical to be performed by the fire department physician with some degree of reimbursement.

D-3 Coordinating the Medical Evaluation Program. An individual from within the department should be assigned the responsibility for managing the health and fitness program, including the coordination and scheduling of evaluations and examinations. This person should also act as liaison between the department and the physician to make sure that each has the information necessary for decisions about placement, scheduling appointments, etc.

Confidentiality of all medical data is critical to the success of the program. Members must feel assured that the information provided to the physician will not be inappropriately shared. No fire department supervisor or manager should have access to medical records without the express written consent of the member. There are occasions when specific medical information is needed to make a decision about placement, return to work, and so forth, and a fire department manager must have more medical information. In that situation, written medical consent should be obtained from the individual to release the specific information necessary for that decision.

Budgetary constraints can affect the medical program. Therefore, it is important that components of the program be prioritized such that essential elements are not lost. With additional funding, other programs or testing can be added to enhance the program.

Appendix E Sample Forms

This appendix is not a part of the requirements of this NFPA document but is included for informational purposes only.

*Under Title VII, an "employer" is defined, generally, to mean a person with "15 or more employees for each working day in each of 20 or more calendar weeks in the current or preceding calendar year." See 42 U.S.C. 2000e. Several federal jurisdictions have held that unpaid volunteers are not considered to be "employees" under Title VII.

E-1 Physical Exam Summary

Employer:	
Employee's Name:	Position Title:
Date of Exam:	Examining Physician:

Components Performed	Within Normal Limits	Abnormal, Able to Perform Job Tasks	Abnormal, Unable to Perform Job Tasks	Significant Changes Noted from Previous Exam (If Applicable)
☐ Physical Exam				
☐ Audiogram				
☐ Pulmonary Function				
☐ Treadmill Stress				
☐ EKG-12 Lead				
☐ Chest X-ray				
☐ Mammogram				
☐ Pelvic/Pap				
☐ Laboratory Tests				
☐ Other				

Explanation of Abnormal Results/Significant Changes:

☐ Medically cleared to perform job tasks

☐ Denied medical clearance for current job tasks

H of P.I.: Mr./Ms. _____ is a ____v.o Fire Fighter Police Officer with the _____ department. The purpose of this annual physical is to establish fitness for the continuation of those duties. He/she has enjoyed good health. Mr./Ms. _____ voiced the following questions.

Medical History

___ D.M.
___ HTN
___ CVD
___ Asthma

Surgical History

___ Orthopedic
___ ENT
___ Optho
___ Other

Medications

Allergies

Exercise

Social History

___ Smoke
___ PPD
___ Quit
___ PkYr
___ Alcohol
___ Amount
___ Frequency

ROS

GI
___ Hematochezia
___ Stool Caliber
___ Bowel Habits
G.U.
___ Stones
___ Hematuria
CV
___ Chest Pain
___ SOB
Resp
___ Cough
___ Wheezes
___ SOB

FH

___ DM
___ HTN
___ CVD

Physical

Insert Physical Here

Audio

___ HFHL
___ Speech Range

Vision

___ Near
___ Far
___ Corrected

EKG/TMT

___ HR
___ Target
___ Interp
___ Stage Achieved

Blood

H/H _____
WBC _____
Glu _____
Chol _____
HDL _____
Ratio _____
Risk _____

Stool OB

___ Positive
___ Negative

Pulm

FVC _____
% Pred _____
FEV1 _____
%Pred _____

LFTs

SGOT _____
SGPT _____
GGT _____
Other _____

UA

___ Blood
___ Protein
___ Glucose

E-2 Medical Examination

1. NAME (Last) (First) (Middle)				2. SEX	3. DATE OF EXAMINATION	
4. PLANT OR DIVISION	5. SOC. SEC. OR EMPLOYEE NO.	6. OCCUPATION			7. DATE LAST EXAMINATION	
8. REASON FOR PRESENT EXAMINATION ☐PRE-PLACEMENT ☐D.O.T. ☐SURVEILLANCE ☐IMMIGRATION ☐F.I.T						
9. TEMP.	10. PULSE	11. BLOOD PRESSURE		12. HEIGHT Ft In.	13. WEIGHT	14. TITMUS SNELLING
15. VISION	UNCORRECTED			CORRECTED		16. COLOR VISION (Use Code)*
DISTANT	RE 20/	BOTH	LE 20/	RE 20/	BOTH	LE 20/
NEAR	RE 20/	BOTH	LE 20/	RE 20/	BOTH	LE 20/

CLINICAL EVALUATION

	AREA EXAMINED	*USE CODE	REMARKS (DESCRIBE ALL "CODE 1s" IN DETAIL)
18.	Head and Neck		
19.	Thyroid		
	Lymph Nodes		
20.	Eyes		
	Fundi		
21.	Ears		
22.	Nose and Sinuses		
23.	Mouth and Throat		
24.	Teeth		
25.	Chest and Lungs		
	Breast		
26.	Heart		
27.	Abdomen		
28.	Inguinal, e.g., Hernia		
29.	Genitalia		
30.	Pelvis		
31.	Anus and Rectum		
	Prostate		
	Proctoscopic		
32.	Spine		
33.	Skin		
34.	Arms		
	Hands		
35.	Legs		
	Feet		

*CODE: 0 — within normal limits 1 – significantly abnormal X – not examined

36.	Peripheral-Vascular		
37.	Neurologic		
38.	Emotional Status		
39.	Other		

40. Urine Dip:	Glucose:	Albumin:	S.G.:	
	Heme:	Leukocyte-Esterase:	Other:	
41. Flex	42. Step Test	43. Body Fat	44. PFT	45. Audio

46. Chest X-ray (Use 0, 1, or X)	47. EKG (Use 0, 1, or X) and specify test used	48. Hemocult

49. Back Eval.	50. Tetanus	51 PPD	52. Stress Test

53. Other X-ray or Laboratory Findings

54. Physician's summary, remarks, and diagnoses, including recommendations made to patient (include code numbers for diagnoses and conditions found)

55. Recommendation/Restrictions ☐ ☐ ☐	56. R.N. Signature 57. Physician's Signature 58. Patient Signature

59. Work Qualifications	60. Contact Person:	61. Date	62. Initial

*CODE: 0 — within normal limits 1 – significantly abnormal X – not examined

HEALTH HISTORY	YES	NO	IF "YES," GIVE DETAILS.
HAVE YOU HAD ANY SURGERIES/OPERATIONS:			
On Your Back, Arm, Leg, or Knee?			
To Treat a Hernia?			
Varicose Veins?			
Other Operations?			
HAVE YOU EVER BEEN HOSPITALIZED?			
HAVE YOU HAD ANY SURGERIES/OPERATIONS?			
Serious Allergy?			
Bad Reaction to Any Medication?			
Advised Not to Take Any Medication (i.e., Aspirin)?			
SKIN — HAVE YOU EVER HAD OR DO YOU CURRENTLY HAVE:			
Hives/Eczema or Rash?			
Chronic Skin Problems (i.e., Cuts Slow to Heal)?			
Excessive Skin Dryness?			
Problems with "Easy Bruising"?			
Chemical or Jewelry Rash/Sensitivity?			
NEURO — HAVE YOU EVER HAD OR DO YOU CURRENTLY HAVE:			
A Psychiatric or Emotional Problem?			
Numbness/Weakness/Paralysis?			
Dizziness or Fainting Spells?			
Severe/Frequent or Migraine Headaches?			
Head Injury, Concussion, or Skull Fracture?			
Neurological Disorders?			
Seizures or Blackouts?			
Stroke?			
EYE — HAVE YOU EVER HAD OR HAVE YOU CURRENTLY HAVE:			
Hearing Loss?			
Frequent Ear Infections?			
Ringing in Ears?			
Other Ear Problems?			
Glaucoma or Cataracts?			
Red Eyes?			
Eye Injury/Vision Loss?			
Other Eye Problems (i.e., Strain from VDT Use)?			
Glasses/Contacts?			
Date of Last Vision Screen?			

HEAD/NECK — HAVE YOU EVER HAD OR DO YOU CURRENTLY HAVE:			
Date of Last Dental Exam:			
Recent Problems with Teeth/Dentures?			
Frequent Mouth Ulcers/Infections?			
Sinus or Hay Fever?			
Frequent Sore Throats?			
Frequent Nose Bleeds?			
Trouble with Thyroid (i.e., Taking Thyroid Medication)?			
Problem Requiring Radiation Treatment to the Neck Area?			
LUNGS — HAVE YOU EVER HAD OR DO YOU CURRENTLY HAVE:			
Asthma or Wheezing ?			
Coughed up Any Blood?			
Shortness of Breath without Apparent Reason?			
TB or a Positive Skin Test For TB?			
Pneumonia or Pleurisy?			
Do You Cough Every Day, Especially in the Morning?			
Pain or Tightness in Chest?			
More Than Three Episodes of Bronchitis in One Year?			
Ever Smoked Tobacco in Any Form?			How Long: Yrs. Packs Per Day: When Quit:
Had a Chest X-ray?			Last Time:
HEART — HAVE YOU EVER HAD OR DO YOU CURRENTLY HAVE:			
Rheumatic Fever or Heart Murmur?			
Heart Disease?			
Treated for Heart Condition?			
Unusually Cold or Bluish-Colored Hands or Feet?			
High Blood Pressure —If "Yes" How Is It Treated?			☐Medicine ☐Diet ☐Exercise
Do You Have a History of Elevated Cholesterol?			
Anemia or Any Blood Disease?			
Phlebitis, Varicose Veins, or Blood Clots/ Poor Circulation?			
Chest Pain with Activity?			
GI — HAVE YOU EVER HAD OR DO YOU CURRENTLY HAVE:			
Ulcers?			
Hiatal Hernia?			
Indigestion, Pain, or Unusual Burning in Stomach?			
Vomiting of Blood?			