

Drill : 12 HEALTH & WELLNESS CONCERNS



Instructor Guide

Topic	<p>Too many firefighter line of duty deaths are health- and wellness-related. Life-style improvements could greatly decrease LODDs in a relatively short period of time.</p> <hr/>
Time	<p>Two hours (more time will be needed if video is shown.)</p> <hr/>
Materials	<p>Appropriate Audio Visual. Optional: “Health and Wellness,” in the Firefighter Life Safety Resource Kit, chapter 3.</p> <hr/>
Motivation	<p>Being able to perform at peak levels when called upon is an important element in the fire service. The health and wellness of a firefighter can affect his or her level of performance, as well as influence the outcome of an injury. Statistics indicate that about half of all firefighter LODDs in the United States are the result of heart attacks. The job is stressful and we must be physically ready to deal with both physical and emotional stress.</p> <hr/>
Objective	<p>The firefighter will demonstrate a general knowledge of the factors affecting health and wellness and measures that can be taken to address potential deficiencies.</p> <hr/>
Overview	<ol style="list-style-type: none"> 1. Understanding physical fitness 2. Physical fitness programs 3. Wellness Considerations 4. Hazards

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HEALTH AND WELLNESS CONCERNS

- The firefighter will demonstrate a general knowledge of the factors affecting health and wellness and measures that can be taken to address potential deficiencies.
- Identify the relationship between physical fitness and the fire service
- List the elements of a fire service physical fitness program.
- Identify wellness concerns that may affect a firefighter.
- Identify health and physical hazards related to the duties of a firefighter.

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Note: Rather than conducting this drill in a lecture format, it may be more beneficial for all participants to facilitate an interactive discussion of the various items. There may be attendees with expertise in a particular area that may be beneficial to others.

I. UNDERSTANDING PHYSICAL FITNESS

A. History:

Firefighting is the Greatest Job

- Rewarding profession, assisting people at their worst hour; chance to work with other talented and committed people as firefighters.
- Good benefits & compensation
- Firefighting can be a full-time, part-time or voluntary endeavor

Firefighting is the Most Dangerous Job

- Heart Disease— #1 cause of LODD
 - Cancer—potential for many types
 - Musculoskeletal injuries—most frequent cause of medical leave
 - Burn injuries—common preventable injury
 - Psychological Stress—too frequently not addressed
 - Environmental Dangers—chemicals
1. Concern initially directed at protection from hazards associated with fireground operations
 - a. Design and purchase of improved protective clothing
 - b. Purchase and use of SCBA which added physical strain and increased stress levels

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- c. Increased injuries, cardiovascular disease, breathing problems, and loss of stamina during emergency operations indicated a need for improved physical fitness
 - d. In 1980, fire service saw value of implementing mandatory physical fitness programs
2. According to Centers for Disease Control (CDC), overall results of a good physical fitness program should include
- a. Reducing risk of dying prematurely from all causes
 - b. Reducing risk of dying prematurely from heart disease
 - c. Reducing risk of developing adult-onset diabetes
 - d. Reducing risk of developing high blood pressure
 - e. Reducing high blood pressure in people who already have it
 - f. Reducing risk of developing colon cancer
 - g. Reducing depression and anxiety
 - h. Controlling weight
 - i. Building healthy bones, muscles, and joints
 - j. Promoting psychological well-being
 - k. Improving sleep habits
3. Analysis based on tasks performed by members is used as basis for developing physical fitness program and for establishing hiring criteria

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B. Task Analysis

1. First step in task analysis is for members to develop a list of basic services provided
 - a. Structural fire fighting
 - b. Wildland fire fighting
 - c. Medical services
 - d. Light and heavy rescue operations
 - e. Hazardous materials responses
 - f. Training functions
2. Determine tools and equipment that each service activity requires
 - a. Hose and nozzles
 - b. Pike poles
 - c. Ground ladders
 - d. Axes
3. Indicate types of physical tasks that each activity requires
 - a. Lifting an inert weight such as an unconscious victim
 - b. Pulling a hose, charged and empty
 - c. Operating a hoseline and nozzle
 - d. Climbing a ladder

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- e. Climbing a flight of stairs in full protective clothing with SCBA
- f. Entering a confined space with hand tools
- g. Pulling a ceiling with a pike pole
- h. Swinging an axe
- i. Categorize into general groups of similar activities such as lifting, pulling, climbing, etc.

C. Performance Requirements

1. Task analysis is basis for determining level of physical ability for new candidates as well as for current firefighter
2. Validated pre-employment physical ability test is mandated by Chapter 8, Section 2, NFPA 1500
 - a. Requires that fire departments develop physical performance standards for all personnel who engage in emergency operations
 - b. To prevent any legal problems, pre-employment physical ability test must be task related and validated by a third party outside fire department or government organization
3. Physical ability test should consist of a representative number of evolutions that duplicate tasks from task analysis
4. Average completion times for purpose of scoring shall be determined by average scorers of current employees doing same test
5. Examples of validated pre-employment physical ability evolutions include

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- a. Step mill - simulates continuous stair climbing -- an activity that firefighters may have to perform at multi-level incidents
- b. Hose drag - simulates actions necessary to maneuver a fully charged fire hose
- c. Victim search - simulates actions necessary to crawl and search a smoke-filled structure
- d. Victim rescue - simulates actions necessary to drag an unconscious, 130-pound victim to safety
- e. Forcible entry - simulates forcing open a door to gain entry at an incident scene
- f. Ladder - simulates various activities involved in use of a regulation two-section ground ladder
- g. Ceiling hook - simulates use of a pike pole or ceiling hook in removal of a ceiling or upper wall
- h. Each evolution is times and candidates are evaluated

D. Annual Evaluation of Physical Fitness

1. NFPA 1500 requires fire department to establish and provide a physical fitness program that meets requirements of NFPA 1583 to enable firefighters to develop and maintain an appropriate level of fitness to safely perform their assigned functions
2. Fitness levels must reflect firefighter's assigned functions and activities and severity of occupational injuries and illnesses associated with these activities
3. All members of department are required to participate in physical fitness program

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4. All members shall be annually evaluated and certified to perform their assigned duties in emergency operations
5. Members who cannot meet physical performance requirements shall enter physical rehabilitation program to assist them in meeting their designated levels
6. Physical fitness program is holistic, positive, rehabilitating, and educational--it is not punitive and should not be used in such a manner
7. Goal of physical fitness is to improve quality of life for all firefighters and to help live a long, healthy life
8. Good physical fitness will improve quality of service provided to the community

E. Medical Evaluation

1. In addition to a physical ability test, a pre-employment medical evaluation and full medical examination must be performed
2. Medical evaluation along with examination determine whether candidate meets minimum level of health and wellness
3. Medical examination provides a baseline for all future medical evaluations and examinations
4. Annual medical evaluation shall be performed on each employee involved in emergency response operations
5. Medical evaluation is required following a lost-time injury or illness and associated rehabilitation program
6. Department should have procedures for reporting non-occupational injuries and illnesses and return to work
7. Annual medical evaluation shall consist of
 - a. Interval medical history

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- b. Interval occupational history, including significant exposures
 - c. Height and weight
 - d. Blood pressure
 - e. Heart rate and rhythm
8. Medical examinations shall be required periodically depending on age
- a. Age 29 and under - every 3 years
 - b. Age 30 to 39 - every 2 years
 - c. Age 40 and over - every year

F. Medical Examinations

1. Pre-employment medical examination and periodic medical examination for current employment should include
 - a. Vital signs such as pulse, respiration, blood pressure, and temperature
 - b. Dermatological system
 - c. Ears, eyes, nose, throat, and mouth
 - d. Cardiovascular system
 - e. Respiratory system
 - f. Gastrointestinal system
 - g. Genitourinary system
 - h. Endocrine and metabolic systems

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- i. Musculoskeletal system
 - j. Neurological system
2. If needed, following tests may be required
- a. Audiometry testing
 - b. Visual acuity and peripheral vision testing
 - c. Pulmonary function testing
 - d. Laboratory testing
 - e. Diagnostic imaging
 - f. Electrocardiography
3. List of category A and category B medical conditions is extensive and can be found in NFPA 1582
- a. Category A medical conditions are defined as any medical condition that would keep a person from performing duties of a firefighter in training or emergency operations
 - 1) Pulmonary hypertension
 - 2) Active tuberculosis
 - 3) Cerebral arteriosclerosis
 - 4) History of incapacitating hypoglycemia
 - 5) Angina pectoris
 - 6) Structural abnormality
 - 7) Limitations of motion in a joint

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- b. Candidates or current employees with category A medical conditions that would prevent them from performing duties of a firefighter shall not be certified as fit for duty
- c. Personnel with severe category B medical conditions that would prevent them from performing duties of a firefighter shall not be certified as fit for duty
 - 1) Unequal hearing loss
 - 2) Allergic respiratory disorder
 - 3) Recurrent sinusitis
 - 4) Hernia
 - 5) Hypertension
 - 6) Disease of kidney, bladder, or prostate
 - 7) Use of steroids, stimulants, or narcotics
- d. AHJ can make reasonable accommodations to allow such an individual to perform other assigned functions

G. Medical Records

- 1. OSHA has very strict requirements regarding development and maintenance of medical records
- 2. Confidentiality is a key issue for proper management of files and databases
- 3. Personal medical files are required to be maintained for length of employment plus 30 years

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4. Reason is that if exposure to a hazardous or toxic chemical or a communicable disease occurs, all members involved who are experiencing an illness due to this particular incident can be tracked
5. Thorough record keeping is necessary from a legal standpoint because it supports position of AHJ in cases involving termination, duty status, and denial of employment to candidates
6. Health records need to incorporate details and results
 - a. Any and all medical evaluations and examinations
 - b. Fitness evaluations
 - c. Exposures (real or perceived) to hazardous materials and toxic chemicals
 - d. Exposures (real or perceived) to blood, body fluids, or other potentially infectious materials
 - e. Inhalations of airborne pathogens
 - f. Excessive exposure to noise
 - g. Occupational injuries or illnesses
 - h. Other pertinent information that needs to be included in a member's health record

II. PHYSICAL FITNESS PROGRAMS

A. Assessment

1. Before exercise can begin, an assessment must be made of individual's level of fitness
2. Assessment is to determine correct exercise plan to meet individuals' needs

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3. Also allows establishment of a baseline for evaluating progress, to set a realistic range of expectations or goals, and to help participants remain motivated
4. Once level of fitness assessment is complete, a physical fitness program can be developed for each individual based on age, need, and gender

B. Flexibility

1. Flexibility or stretching exercises are intended to improve body's mobility
2. Flexibility portion of physical fitness program is composed of five individual exercises to determine range of motion of joints
 - a. Sit-up and reach exercise
 - b. Back-of-thigh exercise
 - c. Shoulder exercise
 - d. Chest exercise
 - e. Front-of-thigh exercise
3. Some recommended exercises
 - a. Lower body stretches
 - 1) Hamstring stretch
 - 2) Quadriceps stretch
 - 3) Toe tower or stretch
 - 4) Lower back stretch
 - 5) Abdominal stretch

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- 6) Inner thigh stretch
 - 7) Calf stretch
 - 8) Crossover hip stretch
- b. Upper body stretches
- 1) Overhead shoulder and chest stretch
 - 2) Neck stretch
 - 3) Chest, back, and shoulder stretch
 - 4) Biceps stretch
 - 5) Triceps stretch
 - 6) Crossover shoulder stretch
 - 7) Back, waist, and shoulder stretch
4. Break down flexibility training program into attainable objectives that ultimately reach goal established in assessment
 5. Attainable objectives may include a minimum number of sit-ups within a specified amount of time
 6. Objectives are increased periodically until maintenance level goal is attained

C. Cardiovascular Fitness

1. Cardiovascular fitness determines ability of body to supply oxygen through circulation system to muscles while performing vigorous activities over an extended period of time
2. During physical fitness assessment, individual performs a 15-minute walk, jog, and/or run

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3. Chart is used to determine maximum oxygen consumption based on distance completed
 4. Cardiovascular exercises must be frequent (a minimum of three times a week); intense, at a moderate level of exertion; sustained for a minimum of 20 minutes; and of a type that exercises large muscle groups continuously
 5. Recommended exercises
 - a. Jogging
 - b. Speed walking
 - c. Bicycling
 - d. Stair climbing
 - e. Skipping rope
 - f. Swimming
 - g. Rowing
 - h. Cross-country skiing
 6. Playing sports is not a recommended substitute for any of these exercises although it may be used to supplement them and make training program more interesting
- D. Muscular Fitness: Must incorporate ways to deal with muscular fatigue, hyperthermia and dehydration
1. Good muscular fitness allows firefighter to perform assigned tasks more effectively and efficiently and reduces potential of personal injury

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2. Adhering to a complete fitness program helps to reduce potential for fatigue, heart disease, stroke, shortness of breath, and stress
3. Program needs to address strength, power, and endurance through ability to perform push-ups, sit-ups, jump and reach exercises, and wall sits exercises. Strength training, aerobic training, flexibility training and performance training.
4. Exercises are directed at six muscle groups
 - a. Midsection
 - 1) Curl-ups
 - 2) Oblique curl-ups
 - b. Legs
 - 1) Barbell or dumbbell half-squats
 - 2) Barbell or dumbbell lunge
 - 3) Barbell or dumbbell toe raise
 - 4) Manual resistance knee extension
 - 5) Manual resistance knee flex
 - c. Arms
 - 1) Barbell or dumbbell biceps curl
 - 2) Barbell or dumbbell triceps extension
 - 3) Manual resistance biceps curl
 - 4) Manual resistance triceps extension
 - d. Chest

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- 1) Barbell bench press
- 2) Dumbbell flies
- 3) Manual resistance push-ups
- 4) Manual resistance flies

e. Shoulders

- 1) Manual resistance lateral raise
- 2) Dumbbell lateral raise

f. Back

- 1) Manual resistance rowing
- 2) Dumbbell one-arm rowing

5. It is always important to warm up and cool down before and after each workout

E. Body Composition

1. Is relationship of lean-to-fat tissues in body
2. Is determined through comparing height to weight
3. To reduce quantity of fat tissues in body, a healthy diet must also be utilized

F. Equipment

1. Necessary equipment varies depending on finances available
2. At a minimum, it should consist of workout uniforms, T-shirts, jogging shorts, warm-up suits, and athletic shoes

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3. Workout mats should be available in each station or at the central location where exercises will take place
4. Free weights, exercise machines, powered stair-climbing equipment, and stationary bicycles may also be provided
5. It might be more economical to initially enter into a contract with a local health care facility or gymnasium for use of its weights and machines

III. WELLNESS CONSIDERATIONS

(Note: The effects of psychological pressures and stress are part of a firefighter's professional life. Issues of psychological stress and mental wellness are discussed in the companion drill to this one: Mental Health Services. These drills should be used in tandem when discussing firefighter health and wellness.)

Nutrition

1. Recent studies have linked poor diet to heart disease, cancer, diabetes, high blood pressure, high cholesterol, and other diseases
2. Training can include learning negative effect of certain foods such as those high in unsaturated fats, guidelines for a balanced diet, the results of good nutrition, and effective weight-control diets
3. Eat foods which contribute to heart disease prevention and cancer prevention—rich in fiber, antioxidants (vitamins A, C & E) and protein. Avoid foods containing saturated fat and transfatty acid.
4. Information on nutrition issues can be obtained from CDC, state or local health department, or American Heart Association

A. Smoking

1. May affect cardiovascular/pulmonary function

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2. May cause cancer

B. Back Care

1. Back injuries rank just below heart disease as a cause of firefighter injury
2. Training would include learning following
 - a. Techniques for proper lifting and carrying
 - b. Types of equipment that require assistance for carrying
 - c. Methods for dragging hoselines
 - d. Exercises for strengthening back muscles

D. Heart and Lung Diseases

1. Training should include learning
 - a. Importance of unimpaired lung capacity and unobstructed blood circulation
 - b. Causes of heart and lung diseases
 - c. Methods for reducing potential for those diseases
 - d. Maximal Cardiovascular Health Demands that ever firefighter wear his or her mask—CARBON MONOXIDE IS THE KNOCKOUT PUNCH.
2. Department must implement a policy for use of SCBA in all toxic atmospheres and in suspected or unknown atmospheres
3. Smoking-cessation program should be developed and implemented

E. Infection Control

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1. Exposure to a communicable disease can occur just as quickly during cleaning and decontamination of equipment as it can during delivery of patient care
2. Common philosophy is that all patients must be treated as though they have a communicable disease
3. Infection control identifies such issues as
 - a. Personal protective clothing
 - b. Mechanical resuscitation equipment
 - c. Pre-exposure vaccinations for personnel
 - d. Training and education in infection control
 - e. Development of standard operating procedures
 - f. Medical requirements
4. OSHA bloodborne pathogens regulation applies to all occupational exposures to blood or other potentially infectious materials
5. Key to ensuring compliance with regulation is the development of exposure control program and training of members about process for preventing and controlling infection exposure
6. Written plan provides necessary guidelines to ensure compliance and to ensure that personnel understand infection control process
7. Process for controlling potential exposures is accomplished by a thorough training and education program
 - a. Understanding potential exposure hazards

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- b. Recognizing appropriate level of protection to be worn or used
 - c. Knowing methods of caring for an exposure victim
 - d. Reporting exposure incident
8. Training occurs when an individual is hired and then annual thereafter
9. Detailed contents for training are found in 29 CFR 1910.1030
10. Reporting
- a. Fire department must maintain complete records of both exposures to members and member training to meet record keeping requirements of 29 CFR 1910.1030
 - b. Exposure form, completed at time of exposure, must contain
 - 1) Name and social security number of individual
 - 2) Copy of individual's hepatitis B vaccination status
 - 3) Copy of results of all examinations, medical testing, and follow-up procedures
 - 4) Copy of fire department physician's written opinion
 - 5) Description of employee's duties at time of incident
 - 6) Documentation of circumstances of exposure
 - 7) Results of source individual's blood testing

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- 8) All medical records relevant to treatment of employee
- c. Training records, which must be retained for 3 years from time of training, include
- 1) Dates of training sessions
 - 2) Summary of training given
 - 3) Names and qualifications of training personnel involved
 - 4) Names and job titles of all those attending training sessions
- d. Follow-Up
- 1) Department ensures that medical evaluation and follow-up care occurs within 24 hours after presumed exposure to bloodborne pathogens
 - 2) Following tasks shall be performed during evaluation
 - a) Document route of exposure and circumstances of exposure
 - b) Identify source individual if known
 - c) Test source individual's blood as soon as possible
 - d) Inform exposed employee of results of testing of source individual
 - e) Collect and test exposed employee's blood for hepatitis viruses and HIV status

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- f) Supply post-exposure prophylaxis, if needed, to employee
- g) Provide counseling/employee assistance to employee
- h) Perform fitness-for-duty evaluation

IV. HAZARDS

Environmental hazards have been linked to diseases in firefighters, including certain types of cancer.

A. Designated Cleaning and Disinfecting Areas

1. Both 29 CFR 1910.1030 and NFPA standards 1500 and 1581 require new and existing fire stations to have two separate areas designated for cleaning and disinfecting
2. Cleaning materials used in two areas, such as scrub brushes, disinfectant solutions, soaps, and sponges, should be stored within easy reach of sink
3. Provide a written protocol for disinfecting and cleaning of protective clothing, medical equipment, and fire fighting tools and apparatus
4. Well-ventilated drying areas for clothing and equipment should be provided
5. Disinfecting and cleaning facepieces must follow manufacturer's recommendation and guidelines found in current edition of NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for the Fire Service, or other applicable respiratory protection standards
6. Written protocol for cleaning and disinfecting should designate location and method for maintaining SCBA facepieces

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7. Eyewash stand and disinfecting shower should be located within work area or apparatus bay in addition to cleaning and disinfecting sinks

B. Indoor Air Pollution

1. External Pollution

- a. External pollution from vehicular traffic, local industry, or natural sources can only be controlled by keeping pollution out of structure
- b. Older structures should be updated with storm windows, new air-handling systems, and increased weather stripping around openings

2. Internal Pollution

- a. Internal sources of air pollution include heating and cooling system, water heater, use of tobacco products, and mold and mildew in heating ducts
- b. NFPA 1500 requires installation of carbon monoxide (CO) detectors in both new and existing structures

3. Vehicles in Apparatus Bay

- a. When apparatus, light vehicles, generators, power tools, and lawn equipment are started, they create a great deal of carbon-based pollution
- b. Type of contaminant builds up in a closed or unvented apparatus bay and can enter living quarters through penetrations and air handlers
- c. Use both mechanical means and administrated policy to reduce this pollution

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- 1) Mechanical means include general room ventilation fans, point-of-capture apparatus ventilation systems, or mechanical roof vents
- 2) Positive-pressure air systems within living quarters that keep transmission of apparatus room air out should also be built into building

C. Proper Personal Hygiene

1. Personal hygiene

- a. Personal hygiene is a fundamental defense against spread of germs, bacteria, and communicable diseases
- b. Policies regarding personal hygiene include
 - 1) Taking sick leave rather than working when ill
 - 2) Not sharing protective clothing
 - 3) Cleaning and disinfecting SCBA facepieces following each wearing and according to SCBA manufacturer's recommendations
 - 4) Washing hands before preparing food and after using bathroom
- c. Some departments issue individual sets of protective clothing and SCBA facepieces to help prevent potential of cross-contamination
- d. Some hygiene features are
 - 1) All fire department facilities should have proper hygiene equipment for washing, cleaning, and disinfecting such as mop sinks, clothes washers, and disinfecting and cleaning areas

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- 2) Rest rooms and bathrooms should be designed and maintained so they are not sources of infection

D. Slip, Trip, and Fall

1. To prevent slipping, tripping, or falling, floors should be kept clean, dry, and free of loose items or spills
 - a. Although easy to clean and maintain, terrazzo, tile, or smooth concrete materials have a slick surface that can contribute to slipping, especially when wet
 - b. In new construction or renovation, non-slip floor coverings should be considered
2. Ensure that following guidelines are met to prevent slipping, tripping, or falling:
 - a. "Caution: wet floor" signs should be provided for use during cleaning activities
 - b. Traffic patterns used to reach apparatus bays must be kept free of obstructions
 - c. Doors must swing in direction of travel where possible
 - d. Stairs must be equipped with handrails and non-slip treads
 - e. All walk areas must be well lit
 - f. Two-tier bunk beds must not be used due to climbing and falling hazard inherent in their design
 - g. Apparatus bay floors should be well drained and non-slippery

E. Basic Housekeeping Procedures

1. During daily cleaning
 - a. Floors are swept and mopped

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- b. Upper surfaces are dusted
 - c. Materials are stored
 - d. Linens and towels are washed
 - e. Kitchens and rest rooms are disinfected
2. Weekly cleaning takes care of larger tasks
 - a. Cleaning apparatus room walls and ceilings
 - b. Outside cleaning
 - c. Washing windows
 - d. Cleaning out cabinets and storage areas
 - e. Stripping and waxing floors
 2. Stripping and waxing floors, though done during work period, should only be done annually or based on floor manufacturer's instructions
- F. Illumination
1. Fire department facilities should be well lit internally and externally
 2. Artificial light should be sufficient for most tasks such as reading, preparing reports, maintenance, or cooking
 3. Apparatus bay lighting should be in weatherproof fixtures and provides with protective light covers or cages
- G. Noise Pollution
1. Noise pollution is generated by HVAC systems, machinery, apparatus, and office systems such as printers, telephones, and fax machines

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2. Noise is amplified because of hard surfaces and non-insulated areas within structure
 - a. Noise is a contributing factor in increased levels of stress and tension within workplace and can contribute to hearing loss
 - b. It can interfere with speech communications, be a distraction to mental activities, and be a general annoyance
 - c. It can increase work errors and decrease performance
3. U.S. Government has established limits for exposure to noise based on intensity of noise and duration of exposure

H. Specific Areas of Hazard Concern

1. Shop Areas
 - a. Hearing protection, goggles and gloves should be provided in areas
 - b. Personnel should inspect equipment regularly for defects or broken parts prior to usage and remove, repair, or replace defective or broken equipment
 - c. Depending upon types of work conducted in shop, ventilation is another concern that should be address
2. Apparatus Bay
 - a. Personnel should secure loose equipment to prevent tripping or falling
 - b. Point-of-capture exhaust systems should be attached to vehicles or secured overhead out of way
 - c. Walk paths should be properly marked and kept clear
 - d. Floors should be dry and drain covers kept in place

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- e. Apparatus doors should be equipped with automatic safety features to prevent them from striking apparatus or an individual

3. Offices

- a. Many office injuries are caused by an unsafe act by employees that involves tripping or falling
- b. Personnel should be trained in following office safety guidelines:
 - 1) Chairs should not be used as a ladder or a step
 - 2) Exercise caution when working with filing cabinets
 - 3) Office supplies such as pens, pencils, and letter openers should be carefully stored with points down to prevent puncture wounds
 - 4) When not in use, paper cutters should be kept with blade down and should be equipped with a blade guard

4. Kitchens

- a. Physical injuries in kitchens are usually associated with cuts from sharp objects such as knives, can openers, and graters
- b. Additional training in kitchen safety should be provided to reduce potential for grease and steam burns

5. Rest Rooms and Locker Rooms

- a. Rest rooms and locker rooms, usually designed together, should be spacious to prevent crowding during shift changes
- b. Department should provide permanently attached benches rather than loose chairs or stools and ensure that mirrors are permanently attached to walls and not freestanding
- c. Wall-mounted clothing hooks should be above eye level

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6. Physical Fitness Areas

- a. Personnel should maintain physical fitness areas by performing
 - 1) Clear floor of loose objects
 - 2) Maintain fitness equipment so that it is in good working order
 - 3) Periodically clean equipment to prevent contamination from perspiration
 - 4) Store loose weights in racks when not in use
 - 5) Provide a storage area for exercise mats
- b. Provide training in proper use of equipment

7. Mechanical Spaces

- a. Mechanical spaces containing boilers, water heaters, and heating and cooling systems should be clean and well lit
- b. Ventilation should meet existing code for these types of areas

8. Exterior Areas

- a. Exterior areas around facility should be maintained and well groomed
- b. Trash should be contained in an enclosed and secured area to prevent animals or children from gaining access to it
- c. Parking areas should be well lit and, if necessary, secured by fencing and automatic gates
- d. Garden edging, decorative plant materials, and rocks should be arranged to prevent tripping or falling
- e. Lawn sprinkler heads should be recessed where possible

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- f. Trees should be trimmed, and leaves should be removed regularly

9. Walkways

- a. Walkways, both interior and exterior, should be kept clear and free of loose debris
- b. Railings must be provided on roof walkways and along paths where there is a grade change
- c. All walkways must be lighted, and changes in grade must be visibly marked
- d. Yellow tape or paint should be applied to steps and around work and storage areas

REVIEW

HEALTH AND WELLNESS CONCERNS

- * Understanding Physical Fitness
- * Physical Fitness Programs
- * Wellness Considerations
- * Hazards

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<p>Apply the Drill</p> <p>(Instructor may use this assignment to assess comprehension and mastery of skills presented)</p>	<p>Conduct a self-assessment of your own life-style decisions (regarding health and wellness), which could influence your risk of injury or death while performing your duties. For instance, do you smoke? Are you overweight? Do you get regular cardio exercise? Have you had a medical examination within the past year? Do you abuse alcohol or drugs? If you can identify health and wellness deficiencies, devise a personal plan to begin addressing them. Share your plan with a friend or family member who will support your effort to make positive changes.</p>
<p>References</p>	<hr/> <p><i>Fire Department Safety Officer</i>, 1st ed., International Fire Service Training Association, 2001.</p> <hr/>
<p>Additional Instructor resources to support presentation</p>	<p>There are many books, periodicals and journal articles dealing with health and wellness. The following sources are a place to start. Fire department physicians and other consultants are also invaluable resources.</p> <p>NFPA 1500 <i>Standard on Fire Department Occupational Safety and Health Program</i>, 2002.</p> <p>Firefighter Life Safety Summit Report, 2004. Found at www.everyonegoeshome.com</p> <p>IAFF & IAFC, <i>The Fire Service Joint Labor Management Wellness-Fitness Initiative</i> (Third edition, 2006). Found at www.iaff.org and www.iafc.org.</p>

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	<p>National Volunteer Fire Council (NVFC) and the United States Fire Administration (USFA). <i>Health & Wellness Guide For the Volunteer Fire Service</i>, FA-267/ January 2004. Download at www.usfa.fema.gov</p>
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