

## **Purpose**

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The purpose of this program is to provide guidance to office managers and office staff on the elements of safe office work. The office is like any other work environment in that it may present potential health and safety hazards. Most of these, however, may be minimized or eliminated by designing jobs and workplaces properly and by taking into account differences among tasks and individuals. Inadequate environmental conditions, such as noise, temperature and humidity, may cause temporary discomforts. Environmental pollutants, such as chemical vapors released from new carpeting and furniture, may also induce discomforts.

## **Responsibilities**

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### 1. Management

#### a. Provide training for all office staff in:

- Emergency Procedures
- Electrical Safety
- Office Ergonomics

#### b. Ensure office equipment is in safe working order

#### c. Provide proper storage for office supplies

### 2. Office Staff

#### a. Report all safety problems immediately

#### b. Do not attempt to repair any office equipment or systems

#### c. Maintain a neat and sanitary office environment

## **Noise Hazards**

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Noise can be defined very simply as unwanted sound. Whether a sound is classified as noise or not depends mostly on personal preferences. For noise levels in offices, the most common effects are interference with speech communication, annoyance and distraction from mental activities. Noise in the office can interfere with communications. For example, it may be difficult to talk on the telephone when other people are talking nearby. Speech is likely to interfere with communications, especially if the speakers have similar voices.

The annoying effect of noise can decrease performance or increase errors in some task situations. If the task requires a great deal of mental concentration, noise can be detrimental to performance. Also, there is some indication that unexpected or unpredictable noise can have more of an effect than continuous or periodic noise. The annoyance caused by noise depends on the individual. Noise can be distracting. A sudden noise can interrupt activity temporarily, such as when someone drops a heavy object.

### 1. Reducing Noise

Many unexpected noises cannot be controlled, as when someone accidentally drops something. For many of the annoying sounds in the office environment, the following measures are useful for reducing the level of noise or its effects:

- a. Select the quietest equipment if possible. When there is a choice between two or more products, sound levels should be included as a consideration for purchase and use.
- b. Provide proper maintenance of equipment, such as lubrication and tightening of loose parts that can cause noise.
- c. Locate loud equipment in areas where its effects are less detrimental. For example, place impact printers away from areas where people must use the phone.
- d. Use barrier walls or dividers to isolate noise sources. Use of buffers or acoustically treated materials can absorb noise that might otherwise travel farther. Rubber pads to insulate vibrating equipment can also help to reduce noise.
- e. Enclose equipment, such as printers, with acoustical covers or housings.
- f. Schedule noisy tasks at times when it will have less of an effect on the other tasks in the office.

## **Electrical Safety**

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Electric cords should be examined on a routine basis for fraying and exposed wiring. Particular attention should be paid to connections behind furniture, since files and book-cases may be pushed tightly against electric outlets, severely bending the cord at the plug. Electrical appliances must be designed and used in accordance with UL requirements.

### 1. Use of Extension Cords

- a. Extension cords shall only be used in situations where fixed wiring is not feasible.

- b. Extension cords shall be kept in good repair and be free from defects in their insulation. They will not be kinked, knotted, abraded or cut.
- c. Extension cords shall be placed so they do not present a tripping or slipping hazard.
- d. Extension cords shall not be placed through doorways, where doors can be closed. This may result in damage to the cord.
- e. All extension cords shall be of the grounding type (three-conductor).

## 2. Unsafe/non-approved Equipment

The use of poorly maintained or unsafe, poor quality, non-approved (by national testing laboratories) coffee makers, radios, lamps, etc. (often provided by or used by employees) should be discarded. Such appliances can develop electrical shorts, creating fire and/or shock hazards. Equipment and cords should be inspected regularly, and a qualified individual should make repairs.

## **Housekeeping**

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Good housekeeping is an important element of accident prevention in offices.

Poor housekeeping may lead to fires, injuries to personnel or unhealthful working conditions. Mishaps caused by dropping heavy cartons and other related office equipment and supplies could also be a source of serious injuries to personnel.

Passageways in offices should be free and clear of obstructions. Proper layout, spacing and arrangement of equipment, furniture and machinery are essential.

All aisles within the office should be clearly defined and kept free of obstructions.

Chairs, files, bookcases and desks must be replaced or repaired if they become damaged. Damaged chairs can be especially hazardous. Filing cabinet drawers should always be kept closed when not in use. Heavy files should be placed in the bottom file drawers.

Materials stored within supply rooms must be neatly stacked and readily reached by adequate aisles. Care should be taken to stack materials so they will not topple over. Under no circumstances will materials be stacked within 18 inches of ceiling fire sprinkler heads or Halon nozzles. Materials shall not be stored so that they project into aisles or passageways in a manner that could cause persons to trip or could hinder emergency evacuation.

## Computer Workstations

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Complaints concerning musculoskeletal problems are frequently heard from computer operators. Most common are complaints relating to the neck, shoulders and back. Other concerns are the arms, hands and occasionally the legs.

Certain common characteristics of VDT jobs have been identified and associated with increased risk of musculoskeletal problems. These include:

- a. Design of the workstation.
- b. Nature of the task.
- c. Repetitiveness of the job.
- d. Degree of postural constraint.
- e. Work pace.
- f. Work/rest schedules.
- g. Personal attributes of individual workers.

The key to comfort is in maintaining the body in a relaxed, natural position. The ideal work position is to have the arms hanging relaxed from the shoulders. If a keyboard is used, arms should be bent at right angles at the elbow, with the hands held in a straight line with forearms and elbows close to the body. The head should be in line with the body and slightly forward.

### 1. Display Screens

When work is conducted at a computer, the top of the display screen should be at, or just slightly below, eye level. This allows the eyes to view the screen at a comfortable level, without having to tilt the head or move the back muscles.

Control glare at the source whenever possible. Place VDTs so that they are parallel to direct sources of light such as windows and overhead lights, and use window treatments if necessary. When glare sources cannot be removed, seek appropriate screen treatments such as glare filters. Keep the screen clean.

### 2. Your Chair

The chair is usually the most important piece of furniture that affects user comfort in the office. The chair should be adjusted for comfort, making sure the back is supported and that the seat pan is at a height so that the thighs are horizontal and feet are flat on the floor. An ergonomically sound chair requires four degrees of freedom — seat pan tilt, backrest angle, seat height and backrest height. Operators can then vary the chair adjustments according to the task. In general, chairs with the most easily adjustable dimensions permit the most flexibility to support people's preferred sitting postures.

Armrests on chairs are recommended for most office work except where they interfere with the task. Resting arms on armrests is a very effective way to reduce arm discomforts. Armrests should be sufficiently short and low to allow workers to get close enough to their work surfaces, especially for tasks that require fixed arm postures above the work surface.

### 3. Working Height

The work surface height should fit the task. The principle is to place the surface height where the work may be performed in such a manner as to keep arms low and close to the body in relation to the task. If the working height is too high, the shoulders or the upper arms have to be lifted to compensate, which may lead to painful symptoms and cramps at the level of the neck and shoulders. If, on the other hand, the working height is too low, the back must be excessively bowed, which may cause backache. Generally, work should be done at about elbow height, whether sitting or standing. Adjustable workstations should be provided so that individuals may change the stations to meet their needs. A VDT workstation without an adjustable keyboard height and without an adjustable height and distance of the screen is not suitable for continuous work.

### 4. Work/Rest Schedules

One solution for stress and fatigue is to design the computer operator's work so that tasks requiring concentrated work at the terminal are alternated with non-computer-based tasks throughout the workday. Also, a short break (5-10 minutes) should be taken at least once each hour when involved in continuous work at the computer.

### 5. Other Solutions

Additional measures that will aid in reducing discomfort while working with VDTs include:

- a. Change position, stand up or stretch whenever you start to feel tired.
- b. Use a soft touch on the keyboard and keep your shoulders, hands and fingers relaxed.
- c. Use a document holder, positioned at about the same plane and distance as the display screen.
- d. Rest your eyes by occasionally looking off into the distance.

## **Office Lighting**

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Different tasks require different levels of lighting. Areas in which intricate work is performed, for example, require greater illumination than warehouses. Lighting needs vary from time to time and person to person as well. One approach is to use adjustable task lighting that can provide needed illumination without increasing general lighting.

Task lamps are very effective to supplement the general office light levels for those who require or prefer additional light. Some task lamps permit several light levels. Since task lamps are controlled by the individual, they can accommodate personal preferences.

## **Indoor Air Quality**

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Indoor air quality (IAQ) is an increasingly important issue in the work environment. The study of indoor air quality and pollutant levels within office environments is a complex problem. The complexity of studying and measuring the quality of office environments arises from various factors, including:

- a. Building floor plans are frequently changing to accommodate increasingly more employees and reorganization.
- b. Buildings frequently undergo renovations such as installation of new carpet, modular office partitions and free-standing offices, and painting.
- c. Many of the health symptoms appearing are vague and common both to the office and home environments.
- d. In general, very little data on pollutant levels within office environments is available.
- e. Guidelines or standards for permissible personal exposure limits to pollutants within office buildings are very limited.

Many times odors are associated with chemical contaminants from inside or outside the office space, or from the building fabric. This is particularly noticeable following building renovation or installation of new carpeting. Off-gassing from such things as paints, adhesives, sealants, office furniture, carpeting and vinyl wall coverings is the source of a variety of irritant compounds. In most cases, these chemical contaminants can be measured at levels above ambient (normal background), but far below any existing occupational evaluation criteria.

## **Waste Disposal**

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Personnel should carefully handle and properly dispose of hazardous materials, such as broken glass. A waste receptacle containing broken glass or other hazardous material should be labeled to warn maintenance personnel of the potential hazard.

## **Chemical Safety**

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Each office employee must be made aware of all hazardous materials they may contact in their work area. The Hazard Communication Program includes:

- a. Written program.
- b. Material Safety Data Sheets for each hazardous substance used.
- c. Specific safe handling, use and disposal.
- d. Employee training.

## **Emergency Action Plans**

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Emergency Action Plans are designed to control events and minimize the effects. Through careful preplanning, establishment of Emergency Action Teams, training and drills, employees can be safeguarded and potential for damage to work-site assets minimized.

Emergency Action Plans include:

- a. Exit routes, meeting areas and employee accounting.
- b. Emergency evacuation, incident command and notification to emergency services.
- c. Personal injury and property damage.
- d. Protection of government information, both hard copy and electronic media.
- e. Bomb threats and facility security.
- f. First-aid response.
- g. Use of fire extinguishers.

Emergency Action Team Members (for example, Supervisors, Receptionist/Telephone Operators and key assigned members) should be trained with quarterly reviews and drills. Semiannual drills with all employees should be conducted to ensure effectiveness. First-aid kits or first-aid supplies should be available along with trained first-aid providers.

### **Office Fire Prevention Strategies**

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The best time to think about safety is before a fire starts. Learn the location of fire escape routes and how to activate the fire alarm. Participate in practice fire drills on a regular basis. Become familiar with stairway exits — **Do not use elevators during a fire evacuation, because they may not function during a fire or may expose passengers to heat, gas and smoke.**

1. Heat-producing equipment — copiers, work processors, coffee makers and hot plates — is often overlooked as a potential fire hazard. Keep these devices away from anything that might burn.
2. Electrical appliances can be fire hazards. Be sure to turn off all appliances at the end of the day. Use only grounded appliances plugged into grounded outlets (three-pronged plugs).
3. If electrical equipment malfunctions or gives off a strange odor, disconnect it and call the appropriate maintenance personnel. Promptly disconnect and replace cracked, frayed or broken electrical cords.
4. Keep extension cords clear of doorways and other areas where they can be stepped on or chafed, and never plug one extension cord into another.
5. Do not allow combustible material (boxes, paper, etc.) to build up in inappropriate storage locations (near sources of ignition).

Through a program of scheduled inspections, unsafe conditions can be recognized and corrected before they lead to serious injuries. Take a few moments each day to walk through your work area. Look for items previously pointed out, such as objects protruding into walkways, file cabinets that are weighted toward the top or frayed electrical cords. Advise personnel in the area of the hazards and set about correcting them.

FROM PWR "SAFETY KIT FOR SUPERVISORS" (SEPT. 2001)



## References

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1. NPS Training Module, "Personal Safety and Security," a 16-hour course focusing on awareness and communication, as well as assessment and response techniques. For further information, contact course coordinator Myra Dec at [myra\\_dec@nps.gov](mailto:myra_dec@nps.gov).
2. U.S. Forest Service Videos, Module 1: General Awareness, Personal Safety in Remote Locations, and Module 2: Supervisor Responsibilities, Personal Safety in Remote Work Locations.
3. Further information at NIOSH Web site at [www.cdc.gov/niosh/violrisk](http://www.cdc.gov/niosh/violrisk).
4. Further information at OSHA Web site at [www.osha.gov](http://www.osha.gov), "Violence in the Workplace."

## Requirements

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Employees may encounter opportunistic individuals, persons under the influence of drugs and/or alcohol, and extremist groups. Employees may encounter visitors who are verbally aggressive and/or behaving in a forward, rude or inappropriate manner.

1. Parks must provide training to employees regarding risk assessment, threat assessment awareness and communication skills for conflict situations.
2. Awareness. Employees must be made aware of potential criminal activity in areas (e.g., drug labs, marijuana cultivation, poaching, gang activity, etc.) and be provided with instruction in professional responses should these activities be encountered.
3. Parks must be responsible for facility assessments (meaning all structures, trails, parking lots, campgrounds, etc.) that target places where opportunists could gain an advantage over employees.
4. Parks should provide information for safe personal travel and safe behavior to employees visiting their area for training or details.
5. Parks should secure the workplace appropriate to the work conducted there.
6. Employees should **report all incidents** and threats of workplace violence.

## **Stop, Think, Observe, Plan, Act**

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- Practice mental and physical preparedness techniques every day.
- Be aware. Many individuals do not naturally practice the broad, sweeping awareness necessary for personal safety. This is not a “natural” or “common” skill, and it should be taught.
- Ask questions of supervisors, maintenance, law enforcement and safety personnel.
- Be sure that communication devices are in operation: batteries are charged and radio/cell phones work.
- Know escape routes.
- Have a safe harbor.
- Do not conduct an activity if you feel it is unsafe.