

# Office Safety

## Purpose

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

### Management

- provide training for all office staff in:
  - Emergency Procedures
  - Electrical Safety
  - Office Ergonomics
- ensure office equipment is in safe working order
- provide proper storage for office supplies

### Office Staff

- Report all safety problems immediately
- Do not attempt to repair any office equipment or systems
- Maintain a neat and sanitary office environment

## Noise Hazards

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 also depends on the individual. Noise can also be distracting. A sudden noise can interrupt activity temporarily, such as when someone drops a heavy object.

## **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:

- 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.
- Provide proper maintenance of equipment, such as lubrication and tightening of loose parts that can cause noise.
- 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.
- Use barriers, walls or dividers to isolate noise sources. Use of buffers or acoustically-treated materials can absorb noise that might otherwise travel further. Rubber pads to insulate vibrating equipment can also help to reduce noise.
- Enclose equipment, such as printers, with acoustical covers or housings.
- Schedule noisy tasks at times when it will have less of an effect on the other tasks in the office.

## **Electrical Safety**

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 bookcases 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.

### **Use of Extension Cords**

- Extension cords shall only be used in situations where fixed wiring is not feasible.
- Extension cords shall be kept in good repair, free from defects in their insulation. They will not be kinked, knotted, abraded, or cut.
- Extension cords shall be placed so they do not present a tripping or slipping hazard.
- Extension cords shall not be placed through doorways having doors that can be closed, and thereby damage the cord.
- All extension cords shall be of the grounding type (three conductor).

## **Housekeeping**

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 Work Stations**

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

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

- Design of the workstation.
- Nature of the task.
- Repetitiveness of the job.
- Degree of postural constraint.
- Work pace.
- Work/rest schedules.
- 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.

### **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.

### **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.

### **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 work stations 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.

### **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.

### **Other Solutions**

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

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

### **Office Lighting**

Different tasks require different levels of lighting. Areas in which intricate work is performed, for example, require greater illumination than warehouses. Lighting needs to 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**

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:

- Office building floor plans are frequently changing to accommodate increasingly more employees and reorganization.
- Office buildings frequently undergo building renovations such as installation of new carpet, modular office partitions and free-standing offices, and painting.
- Many of the health symptoms appearing are vague and common both to the office and home environment.
- In general, very little data on pollutant levels within office environments is available.
- 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. Offgassing 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**

Office 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**

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

- Written Program
- Material Safety Data Sheets for each hazardous substance used
- Specific safe handling, use and disposal
- Employee Training

### **Emergency Action Plans**

Emergency Action Plans are designed to control events and minimize the affects. Through careful pre-planning, establishment of Emergency Action Teams, training and drills, employees can be safeguarded and potential for damage to Company assets minimized.

Emergency Action Plans include:

- Exits routes, meeting areas and employee accounting
- Emergency evacuation, incident command and notification to emergency services
- Personal injury and property damage
- Protection of Company information, both hard copy and electronic media
- Bomb threats and facility security
- First Aid Response
- 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 assure effectiveness. First Aid Kits or First Aid supplies should be available with trained First Aid Providers available.