OFFICE SAFETY GUIDELINES

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CHANGES HISTORY SHEET

VERSION	PAGE NUMBER	DESCRIPTION OF CHANGE	APPROVED BY	EFFECTVE DATE
1	1	HSE Advisor changed to HSE Specialist		

1. Introduction

This guidance document aims to provide guidelines and regulates the control of ADWEA offices safety hazards. It covers a general safety rules for housekeeping, electrical safety, filling cabinet, smoking, & the use of Display screen equipments.

Office incidents follow a similar pattern to those in other areas and the basic causes, unsafe acts and conditions, are the same. In fact, nearly half of all office injuries are the result of falls, followed by lifting and handling of goods, materials and equipment, stepping on and striking against objects, falling items, machinery, transport, use of hand tools, fire and electricity.

It is evident from the information above that it is just as important to have guidelines for safe working in the office environment as it is for an industrial one.

2. Scope

This guideline applies to all ADWEA staff.

3. General Office Safety Rules

3.1 Office Areas

Safety signs giving information and instruction about escape routes, emergency actions, etc. must be prominently displayed and arrangements made to keep signs up to date.

Specialist contractor employees regularly inspect lifts, are the only persons allowed to make adjustments to the control systems and devices. Notices stating the safe working load and the maximum number of passengers should be posted inside the lifts.

3.2 Housekeeping

A good standard of housekeeping is required in the interests of safety. It is the responsibility of all ADWEA staff to keep their work area tidy at all times and to report any hazards, to either their immediate supervisor or to their HSE Focal Point.

Floors must be kept free from obstruction or material likely to cause a person to slip, trip or fall. Floors must be regularly maintained and worn or loose floor coverings repaired, or replaced with material that is non-slip, fire retardant and anti-static.

Stairways and corridors must not be used for the storage of goods and materials.

Adequate ventilation should be maintained in photocopying areas and in areas where correcting or cleaning fluids are used.

3.3 Cabinets

The main safety hazard associated with filing cabinets is toppling over and this can be eliminated by:

- filling the bottom drawers first
- not overloading the top drawers
- opening only one drawer at a time
- closing drawers gently with the handle to prevent nipped fingers

Storage cabinets have associated hazards similar to filing cabinets and these can be eliminated by:

- storing items inside the cabinet, not on top where they can fall off
- storing frequent use items at the front
- not overloading the cabinet
- storing heavy and breakable items at the bottom

Only purpose built stools and stepladders should be used for access to high objects.

3.4 Smoking

Smoking is only allowed in designated areas only.

Smoking is not permitted in open areas e.g. open office space, toilets, kitchen, corridors, etc.

3.5 Waste Disposal

Waste must be disposed of properly (see Waste Management Procedure for detailed requirements).

3.6 Fire Systems

A programme of regular maintenance for all fire detection and suppression systems and equipment must be established and records of inspections, adjustments and repairs are maintained.

Fire fighting equipment should be strategically located and identified with appropriate signs.

Access to fire extinguishers and hose reels must be kept unobstructed at all times.

3.7 Materials

Pointed and sharp objects such as drawing instruments, scalpels and scissors should be stored in cases, boxes or covers when not in use. The use of naked razor blades is not permitted.

Minimum quantities only of chemicals and flammable materials such as photocopier fluids, cleaning fluids, oil samples and lubricants are to be kept in offices. Containers for these materials are to be properly labelled.

Stationery should be stored on suitable racking or shelving in accessible areas to minimise the likelihood of back injury as a result of having to use awkward lifting techniques.

Metal waste bins should be provided to minimise fire risk.

3.8 First Aid

Each office premises must have, or have immediate access to, facilities for the early treatment of minor injuries. The facility should comprise a suitable area fitted with first aid equipment.

Sufficient numbers of professionally trained and qualified first aid staff should be available.

All injuries, no matter how minor, are to be reported. This is a requirement of the Company Incident Investigation and Reporting System.

3.9 Electrical Safety

Electrical Hazards

Electricity is such an integral part of our lives at home and in the workplace that we tend to take its power for granted. Carelessness and failure to follow set procedures probably cause many accidents. Electrical accidents in the workplace can, for the most part, be avoided by using safe electrical equipment and observing work practices.

Hazards related to electricity

Shock

Your body becomes part of an electric circuit when an electric current enters at one point and exits at another. High voltage shocks can cause serious burns or death. Shocks occur if you touch both wires of an electric circuit; one wire of an energized circuit and ground; or part of a machine that is "hot" because it is contacting an energized wire and the ground.

Burns

Result when a person touches electrical wiring or equipment that is improperly used or maintained. Typically, these burn injuries occur on the hands.

Arc Occur when high amperage currents jump from one conductor to another through air (usually during opening or closing circuits) or when static electricity is discharged. Fire may occur if the arcing takes place in an atmosphere that contains an explosive mixture.

Explosions

Can result when electricity provides a source of ignition for an explosive mixture in the atmosphere. Ignition can be due to overheated conductors or equipment, or normal arcing (sparking) at switch contacts.

All electrical equipment should be turned off when not in use. At the end of the working day all equipment that is not required to operate overnight must be turned off at the wall sockets if possible. Electrical sockets must not be overloaded; multi-way socket used on the premises will include in the program of Portable Appliance Testing.

The following are the instructions to be followed when working with electricity:

- Only authorised persons may carry out installation, maintenance, repair and removal of hard-wired electrical equipment.
- All electrical equipment shall be properly grounded and/or bonded.
- Treat all electrical equipment as if it were energized.
- Check both the insulation and electrical cords of portable electric tools before placing them in service use ground fault circuit interrupters (GFCI) when appropriate and report possible faulty equipment.
- De-energize electrical circuits before work begins. Use electrical lockout/tagout procedures to avoid inadvertently activating electrical circuits.
- Do not contribute to overloading circuits. For instance, if you replace fuses, use only the proper fuses for the circuit.
- Use proper tools. Hard hats and ladders must be nonconductive.
- Do not leave cover plates off electrical connection boxes, pressure switches and similar small electrical equipment. Replace all cover plate bolts or screws when work is completed and equipment energized. Do not leave the door or front panel open on any motor controller or other electrical enclosure.
- Reconnect all grounding/bonding cables that were temporarily removed before you energize the equipment.
- Avoid working on electrical circuits or equipment while clothing or shoes are wet, or while hands or feet are in water.
- In operating a disconnected switch, stand to one side rather than in front of the switch box.

4. Display Screen Equipments

This section applies to all staff that use display screen equipment in the course of their duties and covers both conventional PCs and Laptops.

In general, the computer is comprised of a central processing unit, display monitor, keyboard and mouse. Components of the computer workstation may include the chair, desk, anti-glare screen, document holder, printer and any other equipment essential for working with computers.

An increased number of computer workstations in the work place have resulted in health concerns related to vision and body aches and pains. Problems associated with computer workstations are generally temporary and can often be solved using simple corrective measures. This guide briefly discusses these concerns and addresses administrative controls (i.e., proper computer set up, monitor positioning, rest breaks and project assignment) and engineering or ergonomic controls (i.e., furniture design, lighting, glare control, computer workstation configuration and layout).
The computer workstation is obviously an essential tool in today's work force. Although visual or musculoskeletal problems can occur, it should be noted that with the proper equipment, unit design, technique and work practices these problems can be controlled. Take a few minutes to look at your work station and use the information provided in this survival guide. The effort will minimize the risk of visual and musculoskeletal problems, and put you in control of your computer work environment.

EYES AND VISION

There are a number of symptoms that may be experienced by computer operators. These symptoms include: visual fatigue, blurred or double vision, burning and tearing eyes, headaches and frequent changes in eyeglass prescription. There is no scientific evidence that computer work causes permanent eye damage, but the temporary discomfort that may occur can reduce productivity, cause lost work time and reduce job satisfaction. Eye complaints are usually the result of glare (direct, specular or diffuse) or visual fatigue.

GLARE

- **Direct** glare is caused by bright windows or strong light sources that are in the visual field of the computer operator (i.e., a strong light shining in your face as you look at the monitor)
- **Specular** glare is reflection that appears on the glass surface of the display screen similar to a mirror like image

- **Diffuse** glare is patches of the screen that are washed out and have lost contrast due to light bouncing off the inner phosphor layer of the monitor surface, similar to washout that occurs to a television image from bright sunlight

Controls To Avoid Glare

- **Keep** the monitor at an angle that prevents the light source from shining on the screen and washing out characters
- **Use** blinds, drapes or shades to block glare from windows
- **Avoid** light colored clothing
- Use a micromesh antiglare filter on the screen to scatter and absorb light or use a neutral density filter to scatter and diffuse light

VISUAL FATIQUE

Extended periods of computer use can put physical strain on the eyes in a number of ways. The following are common causes of visual fatigue:

- **Staring** at the screen without varying eye position or focus
- **Dry** eyes caused by infrequent blinking or low humidity (below 40%)
- **Maintaining** a viewing angle that is above the horizon (higher than if one was looking straight ahead)
- **Poor** image quality due to lack of contrast, a screen that is too bright or dim, flickering of the screen image, inadequate screen resolution or clarity
- **Intense** display colors
- **Incorrect** eyeglass prescription

Controls to Avoid Visual Fatigue

- **Exercise** the eyes by periodically focusing on objects at varying distances
- **Keep** the screen and document holder at the same distance from the eyes
- **Practice** blinking regularly
- **Add** moisture to the air with a steam humidifier, open pans of water or plants

- **Adjust** the screen height so that when seated the top line of the monitor is no higher than your eyes
- **Adjust** the brightness control for comfort
- **Keep** the screen clean
- **Adjust** the contrast control to make the characters distinct from the background
- **Service** or repair monitors that flicker or have inadequate clarity
- **Consult** an optometrist regarding special lenses or the use of bifocals, have regular eye examinations and indicate the distance from your eyes to the monitor

MUSCULOSKELETAL PROBLEMS

Musculoskeletal problems occurring with computer use may range from simple muscle fatigue or neck and back ache to cumulative trauma disorders.

Musculoskeletal complaints involving muscular fatigue or cumulative trauma disorders are usually the result of the following conditions:

- **Maintaining** an unnatural or unhealthy posture while using the computer
- **Inadequate** lower back support
- **Static** load placed on the body by sitting in the same position for an extended period of time (i.e., turning head to the side to view poorly placed document)
- **An** ergonomically poor workstation design

Controls of Musculoskeletal Problems

The control of musculoskeletal problems can be accomplished by utilizing the ergonomic potential of your work station. Furniture, unit design and proper technique often go hand-in-hand. The following are descriptions of desirable features for furnishings and equipment, their setup, and the proper technique to be used with each item.

The Monitor

- **Should** swivel, tilt and elevate (use an adjustable stand, books or blocks to elevate monitors that are not adjustable)
- **Should** be located so the top line of the monitor is no higher than the user's eyes or no lower than 20° below the horizon of the user's eyes or field of vision

- **Should** be at the same level and beside the document holder
- **Should** be between 18 to 24 inches away from the user's face

The Keyboard

- **Should** be detachable and adjustable (legs to adjust angle)
- **Should** be placed to allow the forearm to be parallel to the floor without raising the elbows
- **Should** allow the wrist to be in line with the forearm so the wrist is not flexed up or down
- **Should** include 2 inches of space to rest the wrist or should be provided with a padded detachable wrist rest
- **Should** be placed directly in front of the monitor and at the same elevation as the mouse, track ball or touch pad

The Chair

- **Should** support the back
- **Should** have a vertically adjustable independent back rest that returns to its original position and has tilt adjustment to support the lower back
- **Should** have a pneumatic height adjustment, so that the chair height can be adjusted while the user is in a seated position
- **Should** be adjusted so the back crease of the knee is slightly higher than the pan of the chair (use a footrest or a stack of books to elevate the feet if the chair is too high and not adjustable)
- **Should** be supported by a five prong caster base
- **Should** have removable armrests that are adjustable in all three dimensions
- **Should** have a contoured seat with breathable fabric and rounded edges to distribute the weight and should be adjustable to allow the seat pan to tilt forward or back

The Table/Desk

- **Should** provide sufficient leg room
- **Should** allow for adjustable height
- **Should** have enough surface area (about 8 square feet) to support the computer equipment and space for documents
- **Should** provide at least 30 inches in depth
- **Should** have rounded corners and edges

The Wrist Rest

- **Should** be a minimum depth of two inches
- **Should** be the same length as the keyboard
- **Should** be the same height as the front edge of the keyboard
- **Should** be constructed of firm supportive foam or gel material
- **Should** have a flat top with rounded edges
- **Should** be attachable to the work surface

The Keyboard Tray

- **Should** have adjustable height options
- **Should** have a forward and back tilt feature
- **Should** be large enough for the keyboard and mouse
- **Should** be retractable for storage
- **Should** clamp under the work surface and have a position lock
- **Should** be able to rotate 360 degrees

The Footrest

- **Should** be tilted 10 to 20 degrees from front to back
- **Should** be tall enough to accommodate the person who's feet do not touch the floor
- **Should** be at least 12 inches deep and 20 inches wide
- **Should** be movable, but heavy enough to stay in place

- **Should** have a non-slip surface

The Document Holder

- **Should** be adjustable to fit monitors from 8.5 to 17 inches wide
- **Should** be fully adjustable to permit left or right, up or down, forward or backward, and tilted movement
- **Should** be sturdy enough to support stacks of papers and heavy documents
- **Should** have a wide lip to hold books and manuals open
- **Should** have an adjustable line guide for data entry
- **Should** have a non-reflective material to minimize glare
- **Should** be stable and able to be attached to either side of the monitor

HELPFUL TIPS

The following tips may also help prevent musculoskeletal problems:

- **Provide** a 15 minute break for every two hours of continuous computer use
- **Alternate** work tasks
- **Use** a stretching routine to relax the body
- **Keep** the mouse at keyboard level
- **Do** not grip the mouse tightly
- **Hold** the mouse lightly with all fingers click gently
- **Click** gently

FACTS ON IONIZING AND NON-IONIZING RADIATION

X-Ray Radiation-ionizing radiation

Low energy x-rays are produced by the cathode ray tube and electronic circuitry when the lighted letters and graphics are created on the screen. Almost all of the x-rays are absorbed inside the cathode ray tube or are blocked by the glass. Only an insignificant amount is detectable outside of the unit. It should be noted that low energy x-rays can not penetrate paper.

Ultraviolet (UV) and Infrared Radiation (IR) non-ionizing radiation

UV and IR radiation are produced by the monitor, but at levels well below established health and safety standards. Although non-ionizing radiation is associated with cataracts, the low levels from computers are of no concern. There is no scientific link between cataracts and computer use.

Radio Frequency and Microwave Radiation

These non-ionizing forms of radiation are produced by the high voltage electrical components in the computer. The emissions of radio waves are weaker than actual broadcast signals and the computer is not capable of generating significant microwave radiation.

Electromagnetic Fields (EMF's)

EMF's are produced by the electrical circuits of the computer. Levels are lower than those produced by hair dryers or other household appliances and there is no scientific data linking EMF's to harmful biological effects to humans.

Static Electricity

Static electricity, generated on the screen of the monitor, can attract dust. Grounded screens and antistatic accessories can be used to minimize dust accumulation. Relative humidity between 40% and 60% can also minimize static electricity. If humidity is low, a simple pan of water in the room can provide enough moisture.

Pregnancy and Computers

Users of computers have expressed concerns as to whether low energy x-rays and EMF's have any effects on pregnant women or their unborn child. Scientific research indicates there is no adverse effect on mother or child.

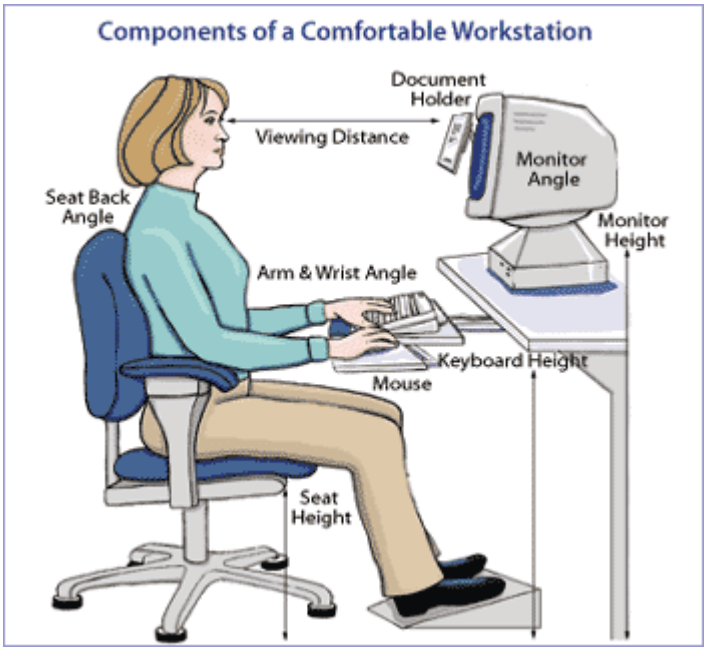
5. A Useful Checklist:

a. Check Your Work Environment

You sit at your computer for eight hours a day, staring at the monitor and making the same tiny finger motions over and over. Your files are electronic, so you don't even get up to go to a filing cabinet. After a full day of this, you're tired — and maybe you even hurt.

People who work with computers have reported a variety of problems that can be related to work habits, work station design or job design. These complaints include fatigue, eyestrain and irritation, blurred vision, headaches and pains in the neck, back, arm and muscles.

It doesn't have to happen. Although the way you work in an office can put a strain on your body, there are things you can do to be more comfortable and to help prevent injuries.



b. Check Your Work Habits

Here are some basic tips:

- Take periodic breaks. The National Institute for Occupational Safety and Health (NIOSH) recommends a 10-minute rest after two hours of continuous computer use, or a 15-minute rest every hour for work that is repetitive or makes intense demands on your eyes. If possible, get up from your desk and walk around.
- In between these breaks, give your eyes a chance to rest by occasionally looking away from the computer screen and focusing on an object at least 20 feet (about 6 meters) away.
- Whenever you can, alternate tasks that use the computer with those that do not. For example, after a long session at the keyboard, make a phone call or go pick up your mail.

- Try to relax and stretch your muscles.
- Sit up straight in your chair. Good posture keeps your body in the proper alignment to reduce muscle strain.

c. Check Your Work Environment

The design of your workstation and the surrounding office can make a difference in your comfort and perhaps reduce injuries. Here are some suggestions from OSHA on proper design for the work area:

Lighting and glare:

- If possible, lighting for computer use should be indirect and not too bright. If direct, overhead lighting is used, light-diffusing slats or louvers on the fixtures can help to reduce glare.
- Workstations should be arranged to reduce glare. Ideally, your computer screen should be at right angles to windows or other light, so you do not have to face the light or see it reflected in the screen.
- Blinds, shades or curtains should be used on windows located less than 20 feet (6 meters) from a computer terminal.
- Glare filters can be attached to the computer screen. These should be used as a last resort because they can make it harder to read text on the screen.

General workstation design:

- Chairs, computer monitors and desks or other work surfaces should be adjustable to ensure maximum comfort.
- The work area should have adequate space for the task and for the individual, including enough room to stretch out the legs periodically.

d. Check Your Equipment

Simple adjustments to your chair, your monitor and other equipment also can help. OSHA suggests these steps:

Chair:

- Adjust the height of the chair so your foot can rest flat on the floor or a footrest and so the backs of your knees are slightly higher than the chair seat.

- Adjust the angle of the chair back and chair so your entire back has firm support and your weight is evenly distributed.
- Make sure the armrests are low and short enough to fit under work surfaces. This allows you to get close enough to the computer.

Computer monitor:

- Adjust the height and angle of the monitor and your computer desk or table so you can look straight ahead or slightly down into the computer screen. The top of the screen should be no higher than eye level, and you should not have to tilt your head backward.
- Sit so that the distance between your eyes and the monitor is about 18 to 30 inches.
- Use the brightness and contrast controls to make sure you can read the screen clearly and with a minimum of glare.

Keyboard:

- Adjust the height of the computer table or other surface where the keyboard sits to make sure you can work with a minimum of strain. Your forearms should be parallel to the floor, with elbows at your sides.
- Use a keyboard extender or tray, if necessary, to ensure the proper keyboard height and appropriate distance from the monitor.
- Align your wrists and forearms. The wrists should be straight, not tilted up or down. A padded wrist rest can help you to maintain this position.

Mouse:

- Your forearm, wrist and hand also should be straight when using the mouse. Your arm should stay close to the body. You should not have to extend or elevate your arm to use the mouse.
- Try a padded mouse rest if this helps you to maintain straight wrists.

Accessories:

- If you will be typing or entering data from a document, use a document holder — either freestanding or attached to the monitor. It should be set at eye level, the same distance from your eye as the monitor, to avoid constant changes in focus or neck strain.

- If you often talk on the telephone while typing or doing other tasks with your hands, use a telephone headset to minimize neck strain.

If you have pain or discomfort despite these precautions, consult your company medical or human resources department to help you find the best way to work comfortably. Many companies will provide special equipment for employees who need it.

How To Prevent Back Injuries On The Job

Four out of five adults will experience significant low back pain in their lifetime. In many cases, this back pain is caused by injuries, and often these injuries are workplace-related.

Back injuries account for nearly 20 percent of all injuries and illnesses that occur in the workplace. They are common in a variety of fields, from construction work to health care and child care. Many of these injuries can be prevented, however.

Healthy Back Guidelines

Here are some of the most important steps you can take to avoid back injuries — at work or at home:

- Use the correct techniques for bending, lifting and moving loads (see list below).
- Exercise your back and abdominal muscles regularly to provide stronger support for the back.
- Wear comfortable, low-heeled, nonslip shoes.
- Do not smoke. Research shows that smoking reduces blood flow to the spine.
- Maintain proper posture to put the least strain on your back.
- If you are overweight, lose weight. Excess pounds, especially in the middle, throw your body out of alignment and increase the burden on your back.
- If you are able, sleep on your side, on a firm mattress.
- Make sure that the work surface is at a comfortable height and that your chair offers good back support; sit as far back in the chair as you can to keep your lower back supported. If you work at a computer, adjust your equipment so you can sit properly.