

# Health and Safety in the Office Guidelines

## Contents

	<b>Page</b>
<b>1. Introduction</b>	<b>2</b>
<b>2. Responsibilities</b>	<b>3</b>
2.1 Employers	3
2.2 Person(s) in control of Workplace	4
2.3 Employees	4
2.4 The Self-employed	4
2.5 Manufacturers & suppliers of equipment & substances	4
<b>3. Office Environment</b>	<b>4</b>
3.1 Temperature and air conditioning	4
3.2 Humidity	5
3.3 Ventilation	5
3.4 Contaminated air	6
3.5 Ozone	6
3.6 Photocopiers	7
3.7 Sick building syndrome	7
3.8 Plants in the office	7
3.9 Lighting	9
3.10 Colour	9
3.11 Office floor space	10
3.12 Maintenance and Service ability	10
<b>4. Safety In The Office</b>	<b>10</b>
4.1 Office accidents	10
4.2 Manual handling	11
4.3 Reducing manual handling injuries	12
<b>5. Keyboard Equipment</b>	<b>13</b>
5.1 Recommended dimensions for seated work stations	13
5.2 Chairs and posture checklist for keyboard workers	15
5.3 Lighting for VDUs	16
5.4 Glare and reflection	16
5.5 Using a mouse	17
5.6 Keyboard equipment and radiation	17

5.7	Keyboard and telephone operations	18
<b>6. Rest Breaks And Exercises</b>		<b>18</b>
6.1	Rest breaks and keyboard work	18
6.2	Eye strain	19
6.3	Muscle care and preparation	19
6.4	Exercises for rest breaks	21
<b>7. References And Further Reading Information</b>		<b>23</b>
<b>8. Keyboard &amp; Workstation Self-Assessment Checklist</b>		<b>25</b>

## **1. Introduction**

- 1.1 The modern office environment presents an array of potential hazards that can be avoided by taking simple precautions. WorkCover NSW has prepared this booklet to outline minimum standards for the office environment, keyboard equipment, rest breaks, and basic occupational health and safety.
- 1.2 Although working in an office has always been considered relatively safe, office workers face occupational hazards that include: eye strain, overuse syndrome, headaches, discomfort, trips and falls and manual handling injuries.
- 1.3 WorkCover NSW is a Government body responsible for administering the occupational health and safety of all NSW workers as well as administering workers compensation and rehabilitation legislation.
- 1.4 *The Occupational Health and Safety Act 2000* aims to protect the health, safety and welfare of all people in every place of work in New South Wales. Under the *Act* employers, employees and the self-employed are required to meet certain standards of health, safety and welfare.

## **2. Responsibilities**

- 2.1 **Employers must** ensure the health safety and welfare of their employees, and to comply employers must:
  - (i) Provide or maintain equipment and systems of work that are safe and without risks to health.
  - (ii) Ensure that equipment and substances are used, stored and transported safely and without risks to health.
  - (iii) Provide information, instruction, training and supervision that ensures the health and safety of employees.
  - (iv) Maintain their workplace in a safe condition, including entrances and exits.
  - (v) Provide adequate information about any research and tests of substances used at work.
  - (vi) Employers must also ensure the health and safety of visitors to the workplace.

- 2.2 Person(s) in control of workplaces** (e.g. a building owner who is not the employer, or a supervisor of an employee(s)) **must:** ensure that the workplace including entrances and exits is safe and without risks to health and safety.
- 2.3 Employees:**
- (i) Must cooperate with their employers in their efforts to maintain the required level of health and safety.
  - (ii) Must take reasonable care of the health and safety of others.
- 2.4 The self-employed:** must ensure the health and safety of visitors to the workplace who are not their employees.
- 2.5 Manufacturers and suppliers of equipment and substances:**
- (i) Must ensure that their products are safe and not a risk to health when properly used.
  - (ii) Must provide clear information about the safe use and storage of their products.
  - (iii) Must make available information about research and testing.

### **3. Office Environment**

- 3.1 Temperature and air conditioning:** The office environment is a combination of lighting, temperature, humidity and air quality. The office can be a healthy and comfortable place to work if the correct combination of these elements is maintained.
- 3.1.2 In Australia most people work comfortably at temperatures between 20'-26' Celsius.
- 3.1.3 The preferred winter temperature is usually about two degrees lower than in summer. *The Australian Standard AS 1837 – 1976*
- 3.1.4 *Code of Practice for Application of Ergonomics to Factory and Office Work* recommends a temperature range of 21'-24' Celsius for both offices and factories in summer.
- 3.1.5 Office temperatures can be localised. A desk situated in direct sunlight will be much warmer than the average temperature in the

office and a desk situated directly under an air conditioning vent can be cooler than average.

- 3.1.6 If there are continual complaints that the office is too warm despite the reading on the thermostat showing the temperature to be within the acceptable range, check that the thermostat has not been situated directly in the air flow from an air conditioning vent.
  - 3.1.7 Some older personal computers can generate as much heat as small electric bar heaters raising local temperatures above the room average. This problem can be compounded by the clustering of computers in one particular section of the office.
  - 3.1.8 Many of the complaints of discomfort in air-conditioned offices occur in the winter time. The cause of the complaints can be because if the air temperature is about 24° Celsius this feels hot to the worker coming into the building from the outside air. The problem can be made worse if the air movement is less than 0.1 metres per second.
- 3.2 Humidity:** Humidity refers to the amount of water vapour in the air. The optimum comfort range for relative humidity is 40-60 per cent. Low humidity can cause dryness of the eyes, nose and throat and may also increase the frequency of static electricity shocks.
- 3.2.1 Relative humidity above 80 per cent can be associated with fatigue and reports of "stuffiness". If relative humidity is consistently high or low, call in an air conditioning expert to conduct a review.
- 3.3 Ventilation:** Ventilation refers to the movement of air and rate of fresh air input. Air movement of less than 0.1 metres per second can lead to stuffy rooms whereas above 0.2 metres per second draughts can be felt.
- 3.3.1 *The Australian Standard AS1668 Part 2 1991 Mechanical ventilation for acceptable indoor-air quality* sets out the absolute minimum requirements for fresh air. For each person a minimum rate of 10 litres per second per person for general office space or 10 litres per second for every 10 square metres of floor space is recommended.

**3.4 Contaminated Air:** Air contaminants in the office can include bacteria, viruses, mould spores and dusts, solvent vapours or chemicals generated or used in the building. Air conditioning units that do not provide adequate amounts of fresh air can cause high levels of CO<sub>2</sub>. Stale air due to poor ventilation and excessive heat build-up or humidity can also contribute to air contamination.

3.4.2 Appropriate control measures for the reduction of air contamination include:

- (i) Effective air Filtration
- (ii) Ensuring that adequate amounts of fresh air enter the building.
- (iii) Maintenance of air conditioning units, including regular cleaning.
- (iv) Preventing the obstruction of vents.
- (v) Locating equipment using solvents in areas with substantial air movement and/or installing local exhaust ventilation.

### **3.5 Ozone**

3.5.1 Photocopiers and laser printers produce ozone gas during operation. It is possible to smell ozone at a concentration of between 0.01 and 0.02 parts per million (ppm), well below the Australian Exposure Standard of 0.1ppm. Ozone does not build up in the air. It breaks down into oxygen quickly after is it released into the air.

3.5.2 At concentrations above the Exposure Standard limit ozone can cause eye and upper respiratory tract irritation, headache and temporary loss of the ability to smell.

3.5.3 Investigations carried out by WorkCover NSW indicate that modern photocopiers fitted with an ozone filter do not present any hazard to health, provided they are properly maintained. Preliminary investigations on laser printers indicate the same result.

3.5.4 To keep ozone levels well below acceptable limits:

- (i) have photocopiers regularly serviced.
- (ii) ensure that an ozone filter is fitted to photocopiers and laser printers.

- (iii) ensure that there is adequate ventilation.

### **3.6 Photocopiers**

- 3.6.1 It is recommended that photocopiers are not placed in or in close proximity to the personal workstations of office workers, because of possible discomfort from the heat, light and noise generated during the photocopying process.
- 3.6.2 Always put the cover down when using a photocopier. The fluorescent, metal halide, or quartz exposure lamps used in photocopiers can irritate the eyes if viewed directly.
- 3.6.3 Tests conducted by WorkCover NSW indicate that the dust from the toners used in photocopiers is well below the Australian Exposure Standard limit of 10mg per cubic metre of air for dust containing carbon black. It is possible, however, if toner dust is breathed in directly, that it could irritate the respiratory tract.

### **3.7 Sick Building Syndrome**

- 3.7.1 The incidence of illness is significantly higher in some buildings than in others. The symptoms that characterise "sick building syndrome" are sore eyes, running nose, headaches, mucous membrane irritation, dry skin, dizziness and nausea.
- 3.7.2 No single, specific cause has been found. It is believed that the syndrome is caused by a combination of poorly adjusted ventilation, air conditioning, temperature, humidity and lighting and psychological factors such as stress, management style and tedious work schedules.
- 3.7.3 Using the solutions to each individual aspect of the office environment offered in this guide may help in alleviating the symptoms that characterise sick building syndrome.

### **3.8 Plants in the office**

- 3.8.1 Studies have shown that plants reduce the levels of toxic substances such as formaldehyde, benzol and carbon monoxide in the air.
- 3.8.2 Some useful plants for the office are on following page:



Chinese evergreen



madonna lily



wrenkii



mother-in-laws  
tongue



heart leaf



corn plant



English ivy



pothos



Madagascar  
dragon tree

### **3.9 Lighting**

- 3.9.1 The basic requirements for adequate lighting are that the work must be easy to see and the light comfortable to the eyes. Illumination is measured in units of LUX - lumens per square metre.
- 3.9.2 Suitable light levels based on *Australian Standard AS 1680 – 1990 Interior lighting are:*
- (i) General background 200 Lux
  - (ii) Routine office work (typing, filing) 400 Lux
  - (iii) Work with poor contrast (proof reading) 600 Lux
- 3.9.3 Sharp differences in illumination between adjacent areas should be avoided. Ideally the surrounding area should be slightly lower in luminance than the task area itself, except in special cases such as viewing outlines against a luminous background.
- 3.9.4 Light should fall from the side rather than from the front to avoid reflections on the work surface.
- 3.9.5 Glare causes visual discomfort and is usually caused by light sources that are too bright or inadequately shielded. (See page 17 for more information on glare.)
- 3.9.6 Lights deteriorate with age and accumulate dirt over the surface. It is advisable to ensure that lights are cleaned at regular intervals, at least every 6-12 months. Fluorescent light flicker indicates either the tube or starter needs replacing.

### **3.10 Colour**

- 3.10.1. Colours determine the level of reflectance as follows: -
- (i) White reflects 75% or more of light
  - (ii) Light colours 50-75% (subdued cool colours)
  - (iii) Medium colours 20-50% (bright warm colours)
  - (iv) Dark colours 20% or less
- 3.10.2 White or off-white is recommended for ceilings as they should reflect greater than 80 per cent of light. Walls should have a reflectance between 50-75 per cent and have a gloss or semi-gloss

finish. Walls near windows should be light in colour whereas those away from windows should be medium coloured below eye level. Floors should reflect less than 20 per cent of light and therefore should be dark coloured. The use of colourful posters and pictures relieves the monotony of the surroundings and also provides relief from eye strain.

### **3.11 Office floor space**

3.11.1 A good rule of thumb for personal space is to allocate 6.25 square metres per individual workstation, including furniture and fittings, but excluding passageways and amenities. Check with your local occupational health and safety authority for more information.

3.11.2 Ten square metres per person for the general, air-conditioned office areas including passageways and amenities, is recommended in *Australian Standard AS 1668 Part 2 – 1991 Mechanical ventilation for acceptable indoor-air quality*.

**3.12 Maintenance and service availability:** for lighting, air conditioning, ducting, and thermostat control, heating and cooling it is the responsibility of Capital Works & Facilities.

## **4. Safety in the Office**

**4.1 Office Accidents:** Most office accidents result from slips, trips and falls, lifting objects, punctures, cuts and being caught in or between things.

4.1.1 Slips are caused by slippery floors, uncleaned spillages or gripless footwear. Trips occur over objects lying on the ground or jutting out into aisles or because of poorly maintained floor surfaces. Falls can be from ladders or from standing on chairs to reach an object.

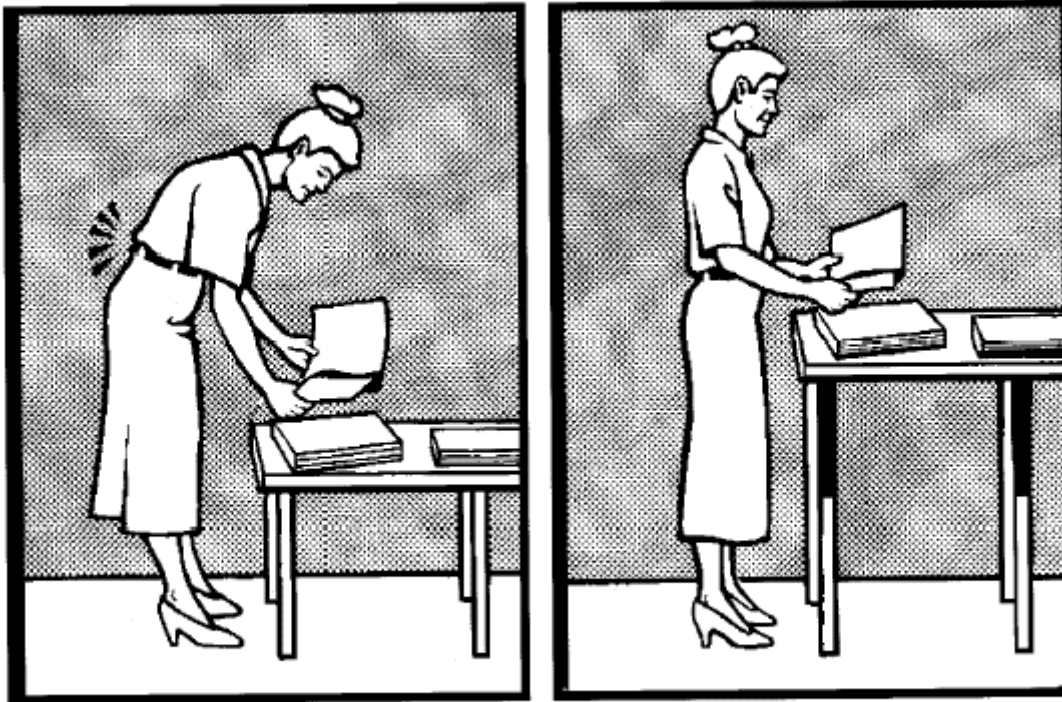
4.1.2 Many of these accidents can be avoided by simple planning and good housekeeping:

- (i) Traffic ways and aisles should be well lit, and be kept clear of materials, equipment, rubbish and electric leads.

- (ii) Floors should be level and the use of mats discouraged. Spilled liquids and anything else dropped on the floor should be immediately picked up or cleaned away.
- (iii) Free standing fittings should be completely stable or secured to the wall or floor. Filing cabinets should be placed so that they do not open into aisles and should never be left with cabinet drawers open. For stability load cabinets starting from the bottom and do not open more than one drawer at a time.
- (iv) Office machines and equipment should be kept in good working order. Equipment using hand-fed processes such as electric staplers, paper shredders and paper guillotines should be guarded and staff trained in their proper use.
- (v) Many pieces of equipment using electricity can mean trailing cables, overloaded circuits, broken plugs and sockets. Ensure that these dangers are seen to by qualified personnel through Capital Works & Facilities.

**4.2 Manual Handling:** Manual handling is a term used to describe everyday activities that involve carrying, stacking, pushing, pulling, rolling, sliding, lifting or lowering loads.

- 4.2.1 For office workers this can include tasks such as moving boxes of stores, filing, getting equipment from cupboards and filling the photocopying machine with paper.
- 4.2.2 Injuries that are a result of a manual-handling incident include twisted ankles, sprains and strains, torn ligaments or broken bones.
- 4.2.3 Many risks arising from manual handling can be controlled by quite simple solutions.
- 4.2.4 For example, the office tasks of sorting/collating and handling bulk mail. In the example below the worktable has had the legs extended by attaching a 350mm extension to each of the legs. This raises the table to a comfortable working height removing the need for continuous bending.



### Don't stoop – change the working height

- 4.2.6 When filing and storing the most commonly used items should be placed according to bulk and weight in readily accessible areas, between knee and shoulder height. Where this is not possible step-ladders with a solid base and a non-slip surface should be provided.
- 4.2.7 *The WorkCover NSW Manual Handling Code of Practice* requires employers to identify, assess and control risks arising from manual handling activities.
- 4.3 Reducing manual handling injuries**
- 4.3.1 Stage 1: Risk identification.** Where are the manual handling injuries happening in the office?
- (i) Look at injury records.
  - (ii) Talk to employees and the workplace OH&S Representative or OH&S Committee.
  - (iii) Watch the work in progress.

**4.3.2 Stage 2: Risk assessment.** What is causing these manual handling injuries? Look at:

- (i) Force applied
- (ii) Actions and movements
- (iii) Range of weights
- (iv) How often, and for how long the job is done
- (v) Where the load is positioned and how far it has to be moved
- (vi) Availability of mechanical aids
- (vii) Layout and condition of the work environment
- (viii) Work organisation
- (ix) Position of the body while working
- (x) Analysis of injury statistics
- (xi) Age of the workers
- (xii) Skill and experience of the workers
- (xiii) Nature of the object handled
- (xiv) Any other factor considered relevant.

**4.3.3 Stage 3: Risk control.** What changes can be made to prevent these manual handling injuries?

- (i) Redesign the job
- (ii) Provide mechanical handling equipment
- (iii) Provide training in manual handling skills

4.4 Once this process has occurred it is important to evaluate the effectiveness of the changes that have been made. Any evaluation must assess whether the changes are used correctly, help reduce manual handling injuries and have not created new problems.

## **5. Keyboard Equipment**

5.1 **Recommended dimensions for seated workstations:** Office workers of all kinds spend many hours using a variety of keyboard equipment. Keyboard equipment that is properly selected, coordinated and adjusted will help prevent a range of injuries caused by overuse, poor posture and poor lighting. These recommendations are based on *Australian Standard. 3590 – 1990. Screen-based workstations, Part 2 - Workstation furniture.*

**5.1.1 Height of work-surface** (height to top of work surface)

- (i) If fixed – 680 to 720 mm above floor level

(ii) If adjustable – 580 to 730 mm above floor level

#### 5.1.2 Area of work-surface

(i) Width – 1500 mm minimum

(ii) Depth – 900 mm minimum

(iii) Bench thickness over leg span – 25mm maximum

#### 5.1.3 Volume of leg-space

(i) Width – 800 mm minimum

(ii) Depth – 550 mm minimum

(iii) Height – 580 mm minimum

#### 5.1.4 Viewing distance to work

(i) Minimum – 350 mm

(ii) Maximum – 750 mm

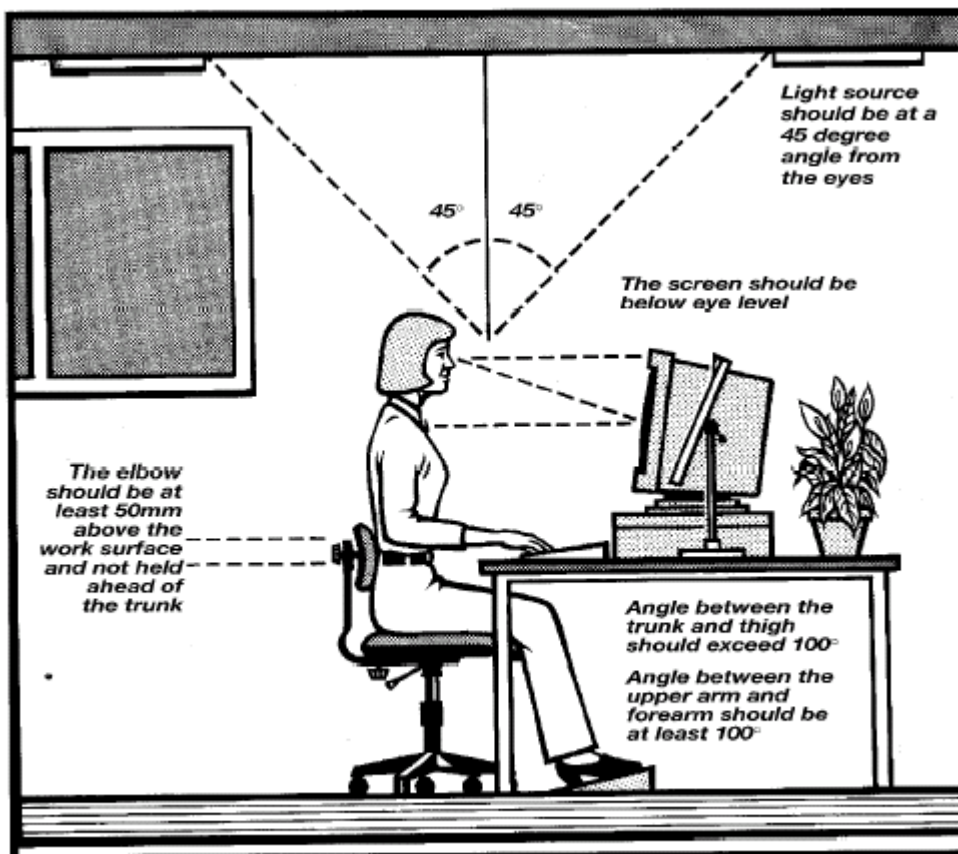
(iii) Height of display – 30-40 degrees below eye level

(iv) Seat pan height

(v) Surface of seat to floor – 380 to 510 mm

(vi) Seat pan depth – 330 to 430 mm

(vii) Footrest area – 300 x 375 mm



Workstation set-up for keyboard operator

## 5.2 **Chairs and posture checklist for keyboard workers**

5.2.1 Well adjusted chairs improve body position and blood circulation, reduce muscular effort and decrease pressure on the worker's back. Chairs should swivel, have five wheels for stability, breathable fabric on the seat, a rounded front edge and have adjustable seat height and backrest for lumbar support.

**5.2.2. Work surface height:** Adjust the height of the work surface and/or the chair so that the work surface is approximately at finger length below the height of the elbow when seated.

**5.2.3. Chair:** Adjust the seat tilt so that you are comfortable when using the keyboard. Usually this will be close to horizontal but tilted slightly forwards. If this places an uncomfortable strain on the leg muscles or if the feet do not reach the floor then a footrest should be used. Adjust the backrest so that it supports the lower back when you are sitting upright.

**5.2.4. Keyboard placement:** Place the keyboard in a position that allows the forearms to be close to horizontal and the wrists to be straight. That is, with the hand in line with the forearm.

**5.2.5. Screen placement:** Set the eye to screen distance at the distance that permits you to most easily focus on the screen. Usually this will be within an arm's length. Set the height of the monitor so that the top of the screen is below eye level and the bottom of the screen can be read without a marked inclination of the head. Usually this means that the center of the screen will need to be near shoulder height.

**5.2.6. Desktop layout:** Place all controls and task materials within comfortable reach of both hands so that there is no unnecessary twisting of any part of the body.

**5.2.7 Document holder:** Place this close to the monitor screen in the position that causes the least twisting or inclination of the head.

**5.2.8. Posture and movement:** Change posture at frequent intervals to minimise fatigue. Avoid awkward postures at the extremes of the

joint range, especially the wrists. Take frequent short rests rather than infrequent longer rests. Avoid sharp increases in work rate. Changes should be gradual enough to ensure that the workload does not result in excessive fatigue. After prolonged absences from work the overall duration of periods of keyboard work should be increased gradually if conditions permit.

### **5.3 Lighting for Visual Display Units**

5.3.1 Place VDUs to the side of the light source(s), not directly underneath. Try to site desks between rows of lights. If the lighting is fluorescent strip lighting, the sides of the desks should be parallel with the lights.

5.3.2 Try not to put the screen near a window. If it is unavoidable ensure that neither the screen nor the operator faces the window. If the VDU is well away from windows, there are no other sources of bright light and prolonged deskwork is the norm, use a low level of service light of 300 lux. If there are strongly contrasting light levels then a moderate level of lighting of 400 to 500 lux may be desirable but high quality anti-glare screens may be necessary.

### **5.4 Glare and reflection**

5.4.1 It is important to detect the presence of glare and reflection. To determine whether there is glare from overhead lights the seated worker should hold an object such as a book above the eyes at eyebrow level and establish whether the screen image becomes clearer in the absence of overhead glare. To detect whether there are reflections from the desk surface the worker should hold the book above the surface and assess the change in reflected glare from the screen.

5.4.2 A number of ways are available to eliminate or reduce the influence of these reflections:

- (i) Tilt the screen so that reflections are directed below eye level.
- (ii) Purchase screens with matt or light diffusing surfaces.
- (iii) Cover screens with a light diffusing surface or anti-glare screen.

- (iv) Negative contrast screens (dark characters on light background) will reduce the influence of these reflections.

5.4.3 If VDU users experience eye discomfort when using a bright screen they should make the following adjustments:

- (i) Turn the screen brightness down to a comfortable level. This can be judged by placing a piece of paper next to the screen and adjusting the brightness control so that the screen is similar in brightness to the paper.
- (ii) Look away into the distance in order to rest the eyes for a short while every ten minutes or so.
- (iii) Change the text and background colours. Recommended are black characters on white or yellow background, or yellow on black, white on black, white on blue and green on white. Avoid red and green and yellow on white.

## **5.5 Using a mouse**

5.5.1 A well-designed mouse should not cause undue pressure on the wrist and forearm muscles. A large bulky mouse may keep the wrist continuously bent at an uncomfortable angle. Pressure can be reduced by releasing the mouse at frequent intervals, by selecting a slim-line, low profile mouse and by using the mouse at a comfortable distance from the body.

## **5.6 Keyboard equipment and radiation**

5.6.1 VDUs emit radiation, particularly visible light that allows the characters on the screen to be seen. Weak electromagnetic fields and very low levels of other radiation not visible to the human eye, can be detected by sensitive instruments, similar, emissions are produced by television receivers.

5.6.2 The levels of most radiations and electromagnetic fields emitted from VDUs are much less than those from natural sources, such as the sun or even the human body, and are well below levels considered harmful by responsible expert bodies such as the International Radiation Protection Association.

5.6.3 Given that the levels of radiation from VDUs are much lower than recommended limits, and that these limits themselves incorporate

significant safety factors, it is extremely unlikely that any harm to an unborn child would result from exposure to the radiation emissions from a VDU.

- 5.6.4 The weak electromagnetic fields produced by television receivers and VDUs extend in all directions, but their intensity decreases very quickly with distance from the source. A workplace should be organised to ensure that VDU operators are no closer to any other VDUs than they are to their own. Flat screen displays, such as the liquid-crystal display used in some laptop computers, produce even smaller amounts of radiation than those which use television-type tubes. It may be sensible to use the new types for special purposes, such as to increase portability but concern about radiation emissions should not be a factor in their choice.
- 5.6.5 Although concerns have been raised that radiation from VDUs is a cause of cancer, research to date has failed to establish a causal link.

## **5.7 Keyboard and telephone operations**

- 5.7.1 Lightweight adjustable headsets with a volume control should be provided for staff on continuous keyboard/telephone operation. For continuous, traffic dependent telephone operations a manual call facility should also be provided.

**Note:** See Attachment 1 (Page 26) for Keyboard & Workstation Self-assessment Checklist

## **6. Rest breaks and Exercise**

### **6.1 Rest breaks and keyboard work**

The key to preventing overuse injuries is to break repetitive work with non-repetitive tasks or exercises and/or rest breaks. Employees need to move around and reduce the effects of fatigue by doing different tasks. However rest breaks should be taken if the job requires a sustained period of repetitive or static activity because task variation is not possible.

- 6.1.1 Frequent short breaks are most effective in relieving the strain associated with keyboard work. For reasonably sustained keying activity a break should be taken for a few minutes every half hour.

During this break operators should walk around and perform whatever movement relieves the feeling of muscle fatigue. Movements that are a natural response to fatigued muscles such as shrugging the shoulders are generally the most effective in dealing with the fatigue.

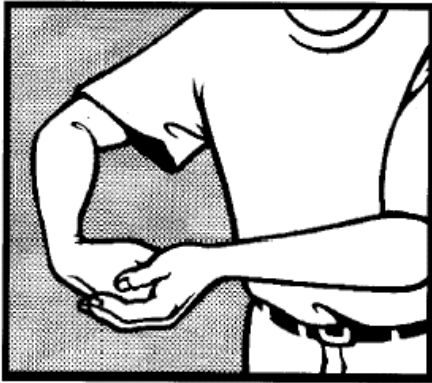
- 6.1.2 A particularly useful method of relieving muscle fatigue is to occasionally alter posture. That is, to change from the recommended posture for short duration. Some chairs have a forward tilt control that allows the worker to sit forward which can sometimes help to reduce fatigue to the muscles of the forearm, neck and shoulders.

## **6.2 Eye strain**

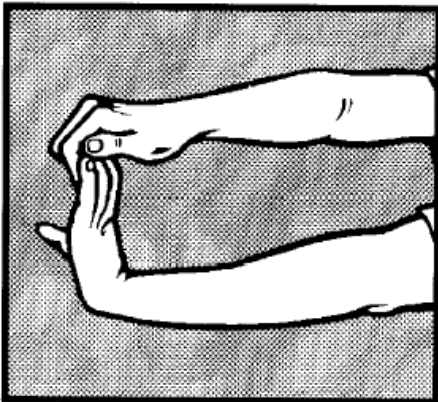
- 6.2.1 Working with VDUs can produce tired and sore eyes and eyestrain. To reduce strain take short rests and look into the middle distance. If necessary, close the eyes and cover them with the hands without pressing and breathe deeply eight or nine times.

## **6.3 Muscle care and preparation**

- 6.3.1 The following exercise should be done before commencing work and after lunch breaks. However, it is important to:
- (i) Never stretch to the point where pain is experienced.
  - (ii) Refrain from doing these exercises if you have a medical condition that could be made worse by stretching.
- 6.3.2 The benefit of the following exercises is best achieved by a gentle stretching action over periods of at least 30 seconds.



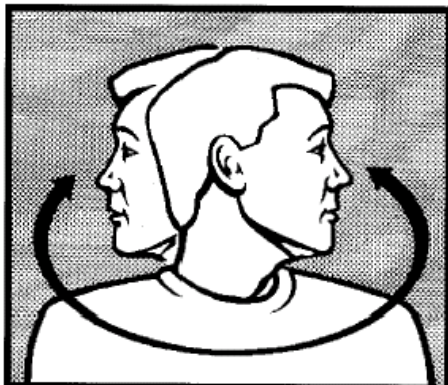
Bend your wrist and fingers with your other hand, bending your elbow slightly at the same time, until you feel the stretch over the back of your forearm. Hold the position for 30 seconds



Stretch your arm out in front of you with your elbow straight, palm facing away from you (fingers pointing up or down). Then with your other hand pull your fingers backwards until you feel the stretch over the front of your forearm. Hold the position for 30 seconds



Tuck your chin down onto your chest and gently turn your head from side to side, keeping your chin on your chest. Do this ten times



Turn your head slowly from side to side ten times.

## Exercises for rest breaks

### Tall stretch:

Interlock fingers, palms up. Stretch arms above the head until they are straight. Do not arch the back.



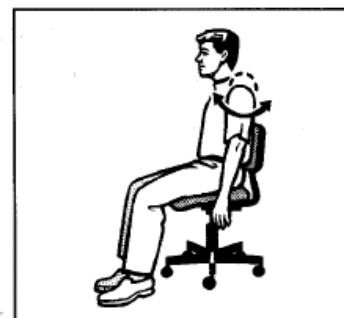
### Toe-in, toe-out:

Place feet shoulder-width apart, heels on the floor. Swing toes in, then out.



### Shoulder roll:

Roll the shoulders - raise them, pull them back, then drop them and relax. Repeat in the opposite direction.



### Side stretch:

Drop left shoulder, reaching left hand towards the floor. Return to starting position. Repeat on right side.



**Back curl:**

Grasp shin, lift leg off the floor. Send forward curling the back, with nose towards the knee. Note: This exercise should be avoided in pre- or post-natal conditions.



**Ankle flex:**

Hold one foot off the floor, leg straight. Flex ankle (pointing toes up) and extend (pointing toes toward the floor). Repeat with other leg.



**Leg lift:**

Sit forward on the chair and place feet on the floor. With a straight leg, lift one foot a few centimetres off the floor. Hold for a second and then return it to the floor. Repeat with the other leg.



## 7. References and Further Reading Information

- (i) Australian Standard 1668.2 – 1991. *Mechanical ventilation for Acceptable indoor-air quality*
- (ii) Australian Standard 1680.2.0 – 1990 *Interior Lighting Part 2.0 recommendations for Specific tasks and interiors*
- (iii) Australian Standard 1837 – 1976 *Code of Practice for application of ergonomics to Factory and office work*
- (iv) Australian Standard 3590 – 1990 *Screen-Based workstations Part 1 Visual display Units Part 2 – Workstation furniture*
- (v) The Working Environment Branch of the Commonwealth Department of Science and Technology have produced a Working Environment Series published in the 1980s some of which are of specific interest for Office work:
  - 5 *Daylight at work*
  - 6 *Artificial light at work*
  - 7 *Sunlight at work*
  - 8 *Colour at work*
  - 9 *Fire safety at work*
  - 13 *VDUs at work*
  - 14 *Thermal comfort at work*
  - 15 *Clean air at work*
  - 16 *Office design at work*
- (vi) The National Occupational Health and Safety Commission, WORKSAFE AUSTRALIA has published a number of relevant Publications.
- (vii) *Guidance note for the prevention of Occupational overuse syndrome in keyboard employment.* WAP89/006, January 1989 *Office copying machines.* WAP89/029, December 1989
- (viii) *Ergonomic principles and checklists for the Selection of office furniture and equipment.* November 1991

- (ix) *Technical report of the study group on Radiation and visual display units.* June 1989
- (x) *Technical report of the study group on Eyesight testing of users of screen-based equipment.* (NOHSC:L 004), 1992
- (xi) *(Working with visual display units.* Geneva, International Labour Office, 1989. (Occupational safety and health series 61. ISBN 92-2-106509-X0
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- (xiv) *Screen based equipment furniture / Byron Longstaff.* In GEN (General Equipment News), v.10 no.9, October 1991, p.42-44
- (xv) *Vision and the VDU operator.* Australian Optometrical Association, 1992 doc 028 health and safety in the office page 26to28
- (xvi) *Information bulletin: electromagnetic fields.* Yallambie, Victoria, Australian Radiation Laboratory, October 1992
- (xvii) *SBS a disease of our time?* In Safety Line, No.8 July 1990, p. 10-11, no.9 October 1990, p.12
- (xviii) *Prevalence of overuse injury among keyboard operators: characteristics of the job, the operator and the work environment,* Rodney Green, Christopher Briggs. In Journal of Occupational health and safety Aust. & NZ. v.6 no.3, June 1990, p.205-211
- (xix) *Sick Building Syndrome: Reality, Myth and Mystery,* D.M. Rowe, Dept of Architectural and Design Science, University of Sydney.
- (xx) *Managing Indoor Air Quality – Interim Guidelines,* Building Owners and Managers Association of Australia. Sydney, April 1991.

**KEYBOARD & WORKSTATION SELF-ASSESSMENT CHECKLIST**

**Attachment 1**

(Adapted from the Worksafe Australia Workstation Assessment Checklist)

This checklist is provided to assist in the self-assessment of keyboard workstations.

- Please complete this checklist in consultation with your supervisor.
- Where possible, your supervisor may be able to take appropriate action with you to follow-up recommendations arising from this assessment
- If you require any assistance, please contact the OHS&R Unit Office on your campus.

**SUMMARY**

**Keyboard User:** \_\_\_\_\_

**Date of Assessment:** \_\_\_\_\_

**Department:** \_\_\_\_\_

**Supervisor's Name:** \_\_\_\_\_

<i>Issues Identified</i>	<i>Recommendations &amp; Action Plan</i>

## WORK ORGANISATION

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
<p>Do you have a variety of tasks?</p> <p>If YES, do you have some control over the order in which they are done?</p> <p>Is care taken to avoid placing you under pressure to meet demanding work targets or deadlines?</p> <p>Has there been a constancy in workload recently?</p> <p>If you are a new staff member, or have recently returned from leave, did you have a period to adjust to the workload?</p> <p>Have keyboard work pauses been taken as appropriate?</p> <p>Do you have touch typing skills?</p>		



## CHAIR

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
<p>Is your chair easily adjusted from a seated position?</p> <p>Can you get close to the workstation without impediment?</p>		



Last Update: June 23, 2003

<p>Is the seat height adjusted so that your thighs are parallel to the floor and feet flat?</p> <p>Is the backrest height adjusted to fit into the small of your back in a way, which adequately supports the spine?</p> <p>Is the backrest angle adjusted so that you are sitting upright while keying?</p>		
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**DESK**

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
<p>Are your forearms approximately parallel with the floor or angled slightly downwards?</p> <p>Is the desk height adjustable?</p> <p>If No, is it possible to adjust the desk height using another method?</p>		

**FOOTREST (If applicable)**

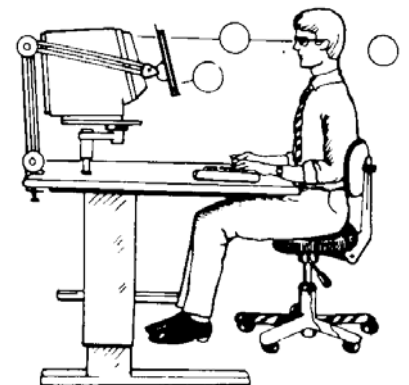
<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
<p>Do you have a footrest?</p> <p>If YES, is the footrest suitable for your needs?</p>		

**COUNTER WORK (If applicable)**

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
<p>Do you work at a counter?</p> <p>If YES, is there a chair of appropriate height and footrest provided at the counter where sitting/standing work is performed?</p> <p>Is the variety of tasks performed in counter operations accommodated by the design and layout of the counter workstation?</p>		

**DOCUMENTS**

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
<p>Are all source documents legible?</p> <p>Is there a document holder provided?</p> <p>If YES, does it support all source documents adequately?</p> <p>Can documents be manipulated easily as required?</p>		



## SCREEN

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
When sitting tall and looking straight ahead, are you looking at the top edge of the screen?		
Is the screen at a comfortable reading distance?		
Are all characters in the display easily legible and is the image stable?		
Can the position and contrast of the screen be adjusted?		
Do you have a problem with glare &/or reflection on the screen?		

## KEYBOARD

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
Is the keyboard detached from the screen to ensure a comfortable working position?		
Is the keyboard thin enough for comfortable positioning of the arms?		

## LAYOUT

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
Are all often-used items within easy reach?		
Is there sufficient space for large documents, completed work or writing?		
Is there sufficient space for equipment and hardcopy materials?		
Is the workstation designed to prevent undue twisting of the neck or trunk? You should consider the positioning of the telephone when assessing this.		



## MOUSE

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
Does your work require the use of a mouse?		
Do you know the key commands to reduce the use of the mouse?		
Have you sufficient space for right or/and left handed operation?		
Is the mouse switch comfortable to use?		
Is your mouse pad level with your keyboard?		
Is your arm extended when using the mouse?		
Is your upper arm positioned relatively vertical to your trunk when you use the mouse?		

**ENVIRONMENT**

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
Do you find the lighting satisfactory?		
Do you find the noise level conducive to concentration?		
Do you find the temperature and airflow in the room comfortable?		

**TELEPHONE OPERATIONS & HEADSETS (If applicable)**

<i>Self-Assessment Questions</i>	<i>Yes</i>	<i>No</i>
Is there a headset or other non-holding way available for continuous telephone operations?		
Is the headset lightweight, adjustable and comfortable?		
Does the telephone equipment include easily adjustable volume controls?		
Do you have difficulty hearing and communicating on the telephone due to noise?		

