

**ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT SYSTEM**

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## Contents

1	PURPOSE.....	3
2	SCOPE.....	3
3	RESPONSIBILITIES.....	3
4	GENERAL GUIDELINES.....	3
5	RECORDS .....	8
6	ATTACHMENTS .....	8
7	REFERENCES.....	8

## **1 PURPOSE**

- 1.1 The purpose of this document is to provide a general guideline to minimise ergonomics risks arising while performing office or manual handling activities.

## **2 SCOPE**

- 2.1 To minimise injuries and disorder associated with office and manual handling activities by taking a systematic approach of identification, assessment and control of the risk associated.

## **3 RESPONSIBILITIES**

- 3.1 Supervisor assigning the person for the task should take a systematic approach of identification, assessment and control of the risk associated.
- 3.2 The personnel performing the tasks should take necessary precautions by using the appropriate methods. Risk assessment must be briefed by the supervisor to every individual who are exposed to the risks during the course of work.
- 3.3 All personnel are to observe this procedure.
- 3.4 Supervisors are to ensure that all personnel understand the work sequence and requirement. Topics shall be from the risk assessment.

## **4 GENERAL GUIDELINES**

### **4.1 Sitting at Work**

- a) Sitting requires the muscles to hold the trunk, neck and shoulders in a fixed position. Prolonged sitting at work can cause backache and result in curvature of the spine which affects the function of internal organs of breathing and digestion. It may also slacken abdominal muscles. Poor body posture is largely responsible for the ill effects of prolonged sitting. Prolonged sitting:
  - Reduces body movement, making muscles more likely to pull cramp or strain when stretched suddenly;
  - Causes fatigue in the back and neck muscles by slowing the blood supply and puts high tension on the spine, especially in the low back or neck; and
  - Causes a steady compression on the spinal discs.
- b) The following measures could be taken for prolonged sitting:

- Adopt a good sitting position by learning how to adjust the workstation to fit individual needs for specific tasks.

c) Select chair with:

- Controls that are easy to operate from sitting position
- A seat that adjusts for both height and tilt
- A seat that does not put pressure the back of thighs or knees
- A backrest that is shaped to support the lower back and does not give way
- A front edge curved downwards
- Non-slip, breathable fabric on the seat
- A stable five-point base
- A minimum seat width of 40 cm
- Arm rests where practical, that do not interfere with free movements within the workstation.

d) Adjust the chair's height to 25-35 cm below the work surface.

e) Introduce five minutes of exercise, such as walking for every 40 to 50 minutes of sitting. Where practical, jobs should incorporate "activity breaks" such as work-related tasks away from the desk or simple exercises which employees can carry out on the worksite.

f) Use a footrest of appropriate height when necessary.

## 4.2 Working with Computers

a) Poor workstation design, work environmental and work conditions may contribute to health problems, sickness absenteeism and loss of productivity. Computer users often complain of eye discomfort as well as aches and pains in the neck, shoulders and upper limbs.

b) Specific work-related risk factors include:

- Fixed, constrained or awkward postures.
- Repetitive and forceful movements.
- Tight schedules and a fast pace of work.
- Prolonged or uninterrupted work.

- Poor lighting and glare
- c) Most of these problems can be prevented by using ergonomically designed furniture and equipment such as adjusting your chair correctly, placing your computer, placing your monitor, mouse and keyboard in the correct position, adopting good work postures and work practices and taking appropriate rest breaks.
- d) The following measures could be considered when working with computers:
- Stand in front of your chair; adjust the height so that the top of the seat pan is just below your knee cap.
  - Sit on your chair and keep your feet flat on the floor with the thighs horizontal and the legs vertical. Check that there is sufficient clearance between the front edge of the seat and the inner part of the legs.
  - Adjust the back rest forward / backward tilt so that the angle between the trunk and the thigh is between 90° and 120°. Adjust the backrest up and down to support the lower back.
  - Place your monitor in front of you about an arm's length away. Position top of monitor at or slightly below eye level.
  - When using a keyboard, keep your forearms, wrists and hands in a straight line. Keep the elbow angle between 90° to 120°. Position mouse at the same level and close to the keyboard.
  - Keep your shoulder relaxed and elbows close to the body.
  - Sit in a slight reclining and relaxed position with the back supported and the feet resting comfortably on the floor or foot rest. Maintain sufficient legroom under the table.
  - Give eyes a break by closing them or glancing at distant object every now and then. Keep head and neck in upright position.

#### 4.3 Manual Lifting

- a) Performing manual lifting repeatedly could be very physically stressful to the body, try to use material handling transport equipment such as trolley where possible.
- b) Poor techniques of manual lifting could lead to back strain or sprain. Always plan before you carry out any manual lifting activities.
- c) The following should be considered:

d) Examine the object:

- Assess its weight and shape and note any sharp edges.
- Typewriters and VDUs are common examples of loads with unequal distribution.

e) Plan the job

- Ensure that there is a clear, safe route to where the object is to be set down, incorporating suitable 'rest stops' if required. If necessary, get someone to help you. If possible use a mechanical aid such as a trolley or pallet jack.

f) Suitable clothing

- Routine/repetitive manual handling may require specialist clothing. In general shoes should be flat with non-slip soles, clothes should be loose enough to allow free movement with no parts (buttons, flaps) likely to snag on the load. Gloves may be necessary if the object has sharp or rough edges. Put on protective footwear when carrying heavy load.

g) Lifting

- Stand close to the load facing the direction in which you intend to travel, with your feet spread to create a firm base.
- Bend your knees and keep your back in a natural line. Don't bend your knees fully as this will leave little power to lift.
- Grasp the load firmly. The best grip is one in which the fingers are curled into a hook.
- Raise your head.
- Lift with your legs. Use your leverage, momentum, balance and timing for a smooth action. Move your feet as necessary. Avoid twisting the body during lifting. Do not bend sideways.
- Hold the load close to the centre of your body.
- Carrying.
- Keep the load close to your body, with your arms and chin tucked in.
- Avoid twisting your body, stooping, bending or leaning back.
- If you need to change direction, move your feet.

- Don't change your grip unless the load is sufficiently supported.
- Don't block your vision with the object you are carrying.

#### h) Loading and Unloading

- The same care should be applied as when lifting a load.
- To lower the object the knees should be bent, with the back kept straight and the weight close to the body.
- If the load is to be placed on a bench or table, rest it on the edge and push it forward with your arms and body. Where possible sliding the load is safer, particularly when it needs to be fitted into tight places.
- Be careful with fingers and toes. Allow enough room for them when the load is set down.

#### 4.4 Working in an awkward / prolong position

a) Working in an awkward / prolong position could cause muscle strain or sprain. Example of awkward position is carrying out cleaning activities in a restricted area or extending your arms for a prolong position for cleaning purposes.

- Have some warm up to loosen your muscle before conducting such activities.
- Schedule small breaks in between.
- Schedule activities to balance such activities with normal activities which are less strenuous in nature.
- Where possible, try not to bend down to perform tasks as your leg muscle is stronger than your back muscle. Example, kneel down instead to clean the floors to avoid excessive back bending, or kneel next to the bath tub to avoid excessive back bending and arm reaching when cleaning the tub.
- Use tools with long handles for hard to reach areas.

#### 4.5 Pushing of trolley

a) When using trolley or similar material handling transport equipment, the following are to take note of:

- Trolley should not be overloaded.
- Trolley should be stable, easy to move and not obstruct vision.

- Adopt pushing rather pulling as pulling requires more force.
- When pushing, place your hands just below shoulder level on the handle where possible.
- Ensure trolleys are maintained in good working condition. Wheels should be aligned and turn smoothly.
- Report any faulty trolley to your supervisor.

## **5 RECORDS**

5.1 NIL

## **6 ATTACHMENTS**

6.1 Workstation Ergonomics

6.2 Computer and Desk Stretches

6.3 Proper Manual Lifting

## **7 REFERENCES**

7.1 All applicable legislation & other requirement