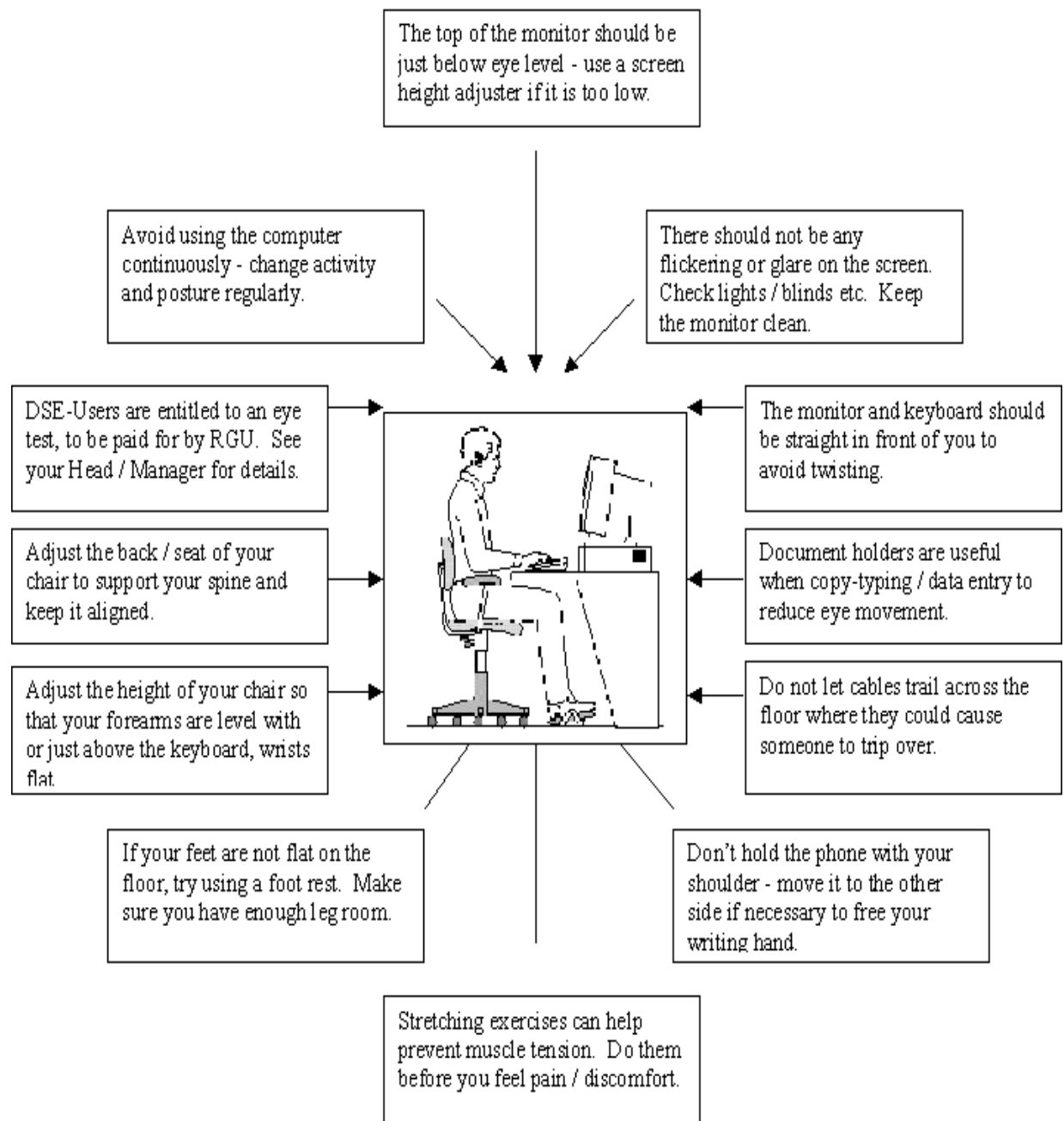


Display Screen Equipment – Safe use Guidelines

Whenever you use a computer, please check that your workstation is safe by checking the points below.



Use of the VDU

In most offices today the VDU (visual display unit), is commonplace. They are used for a wide variety of office work and the equipment consists of the keyboard, display screen, mouse and software package and the desk on which they rest.

Health

There is concern among all involved with VDUs that an operator's health may be at risk. Some of the common complaints are:

Eyestrain

Which may include redness, dryness, soreness, temporary blurring of vision and headaches.

Postural Fatigue

Symptoms are general aches and pains in the neck, shoulders, arms, back, thighs and lower legs.

Repetitive Strain Injury

Felt as persistent pain or discomfort in muscles, tendons and other soft tissues.

Legislation and related guidance sets standards which need to be met by the employer and the worker, in order to avoid these problems and maintain good health.

Continuous use of a VDU requires concentrated use of the eyes. Operators who normally wear bi-focal lens glasses may need a special lens prescribed if they spend a considerable amount of time at a keyboard.

Other problems such as fatigue and repetitive strain injury (RSI) can be avoided by using a well-designed work station and adopting correct posture.

Workstation design

The diagrams above and below indicate the ideal position. You should adjust your workstation so that your posture closely resembles the diagrams, while ensuring you remain comfortable.

Posture

1. The keyboard should be separate from the screen and height adjustable.
2. The screen should be adjustable for height, horizontal swivel and vertical tilt. It should be positioned approximately at right angles to the line of sight and to avoid glare or reflections from windows and lights.
3. An adjustable copyholder should be placed between the screen and keyboard. Both the screen and the copyholder should be within 30 degrees of the viewing angle, i.e. the operator's head will be tilted downward slightly.
4. The chair must have an easily adjustable backrest for both height and tilt. The backrest should be adjusted to support the lower back.
5. The seat height must be easily adjustable and capable of being easily altered from the seated position.
6. The chair base should be five-pronged for stability, swivelled, and fitted with castors or glides for ease of movement.
7. The seat should be reasonably firm and cloth-covered to reduce any problems with static electricity.
8. There should be adequate clearance for the thighs beneath the work surface. The knees should be at 90 degrees when sitting with one hand width between the front edge of the seat and the back of the knee. The feet should be able to be placed flat on the floor; a footrest is optional.
9. The screen image should be sharply focused and free from flicker or swim. The brightness should be easily adjustable.
10. All cabling should be kept out of the way and placed in proper channels or ducting. It is dangerous to run cables across floors particularly in aisles and walkways where they create a tripping hazard, or around the work-station itself, where there is an additional risk of electrical shock due to cables being crushed when run over by the castors on the operators' chair, etc.

Working hours

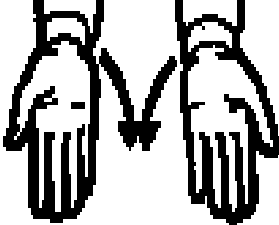
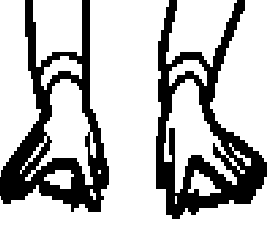
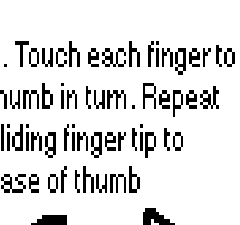
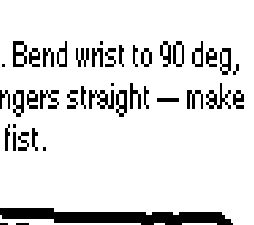

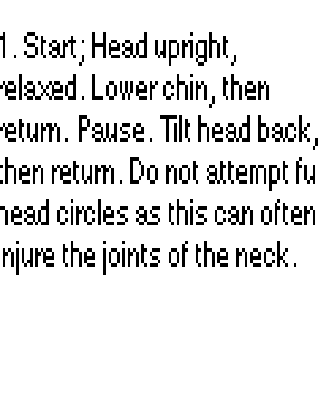




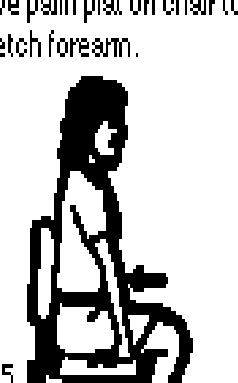
Breaks away from the keyboard during the day can help prevent fatigue. Where an operator must spend the full shift at the keyboard it is important to take regular rest breaks of ten minutes in every hour, either by getting up and doing another task or by doing simple exercises as shown. They should be taken as the operator feels the need but should not be accumulated.

Shorter breaks of 3 to 5 minutes taken at more frequent intervals may be more effective in reducing muscular stress.

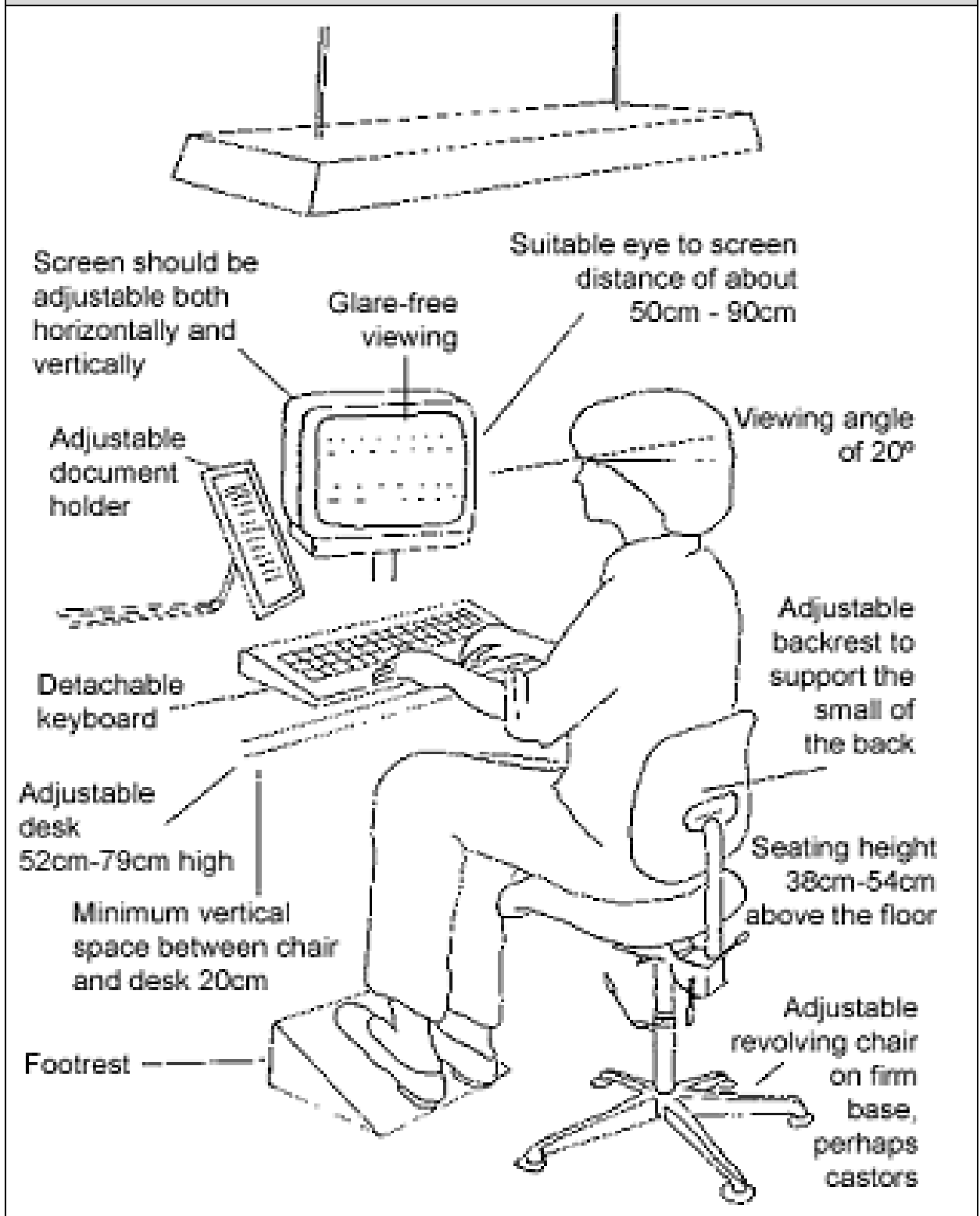
Operators should not be expected to maintain an excessive keystroke rate.

The keystroke rate per minute should be set at a rate which the individual can comfortably maintain. This is particularly important for inexperienced operators and those returning after a period of absence from work that may need to work at lower keystroke rates and/or shorter work periods.

Exercises for keyboard users

 <p>1. With forearms rested, turn palms up then down.</p>	 <p>2. With fingers straight, spread apart then together.</p>	 <p>3. Touch each finger to thumb in turn. Repeat sliding finger tip to base of thumb</p>	 <p>4. Bend wrist to 90 deg, fingers straight — make a fist.</p>		
 <p>1. Start; Head upright, relaxed. Lower chin, then return. Pause. Tilt head back, then return. Do not attempt full head circles as this can often injure the joints of the neck.</p>	 <p>2. Shoulders still, head forward. Bend head towards left sholder, then return. Repeat on other side.</p>				
<p>Stretch slowly to the point where you feel a mild stretching sensation, not pain, in each of the following.</p>	 <p>1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>	 <p>5</p>

Work station set up to achieve best posture and comfortable



Manual handling

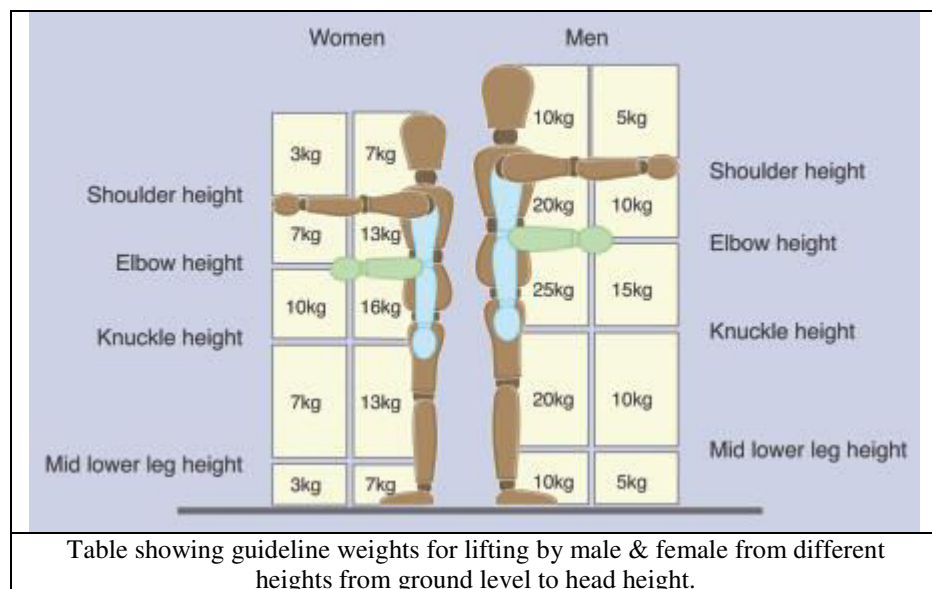
About 30% of all workplace injuries are due to manual handling when lifting, carrying or handling loads. While most manual-handling injuries occur to the back and spine, a person's limbs may also be injured. Poor manual handling, leading to injury of the spinal discs and bones and cartilage in the back, can lead to osteoarthritis.

Osteoarthritis can also occur in joints, particularly hip and knee joints, as a result of poor manual handling.

Soft-tissue injury can occur to tendons, ligaments and muscles. As manual-handling injuries can lead to prolonged pain and suffering, and limit a person's capacity to work effectively, taking preventative measures is vital.

To reduce the risk of manual-handling injuries:

- eliminate the need for lifting as much as possible
- use mechanical aids



If you do need to lift, consider the following:

- assess the load
- assess your capacity to lift
- assess the work environment.

Assessment of a load

The key approach to adopt when assessing a load is to consider its weight. The above chart gives maximum guideline weights to lift in various situations. It may be used to determine if a load is too heavy.

As can be seen, the guideline maximum weight is reduced if lifting is done with the arms extended, or at a height above or below the waist. An injury is more likely to occur when the arms are extended or when twisting of the spine occurs when lifting.

If a weight is too heavy for a person to lift, use a mechanical means of lifting. Many of these are available, including: various trolleys, barrow, tractor & transport box etc. Pump systems can be used to transfer liquids, to avoid the need for man-handling barrels.

Considerable scope exists to eliminate heavy lifting by fitting wheels to heavy loads. Always use an alternative to manual handling when a load is too large or is unwieldy or difficult to grasp.

Use of the correct lifting technique, imparted at a manual-handling training course, involves the following:

- Use of a broad stance for balance and stability
- Keeping your back straight to make sure the weight is evenly distributed on the spine
- Keeping the load close to your body to reduce the pressure on the lumbar spine and prevent static muscle work in the arms and upper body
- Bending your knees to bring the load closer to the centre of gravity of the body and allow the power of the thigh muscles (quadriceps) to lift the load
- Use of the firm power or palmer grip to make sure the load is secure and to avoid using static muscle work in the arms
- Pointing the feet in the direction of movement to prevent twisting of the spine (this is one of the most frequent causes of serious injury during lifting)
- Keeping the arms in line with the trunk of the body, to keep the load as close to the body's centre of gravity as possible, and to prevent the use of static muscle work in the arms

Assess your capacity to lift - two person lift

Manual handling courses also provide instruction on lifting techniques involving two or more people. While the basic techniques are the same as for a single person lifting, a high level of coordination between the lifters is required. Lack of coordination can lead to one person bearing the full weight of the load and the likelihood of a serious back injury. Ensure one person takes charge and gives the instructions to undertake the lift.

Examples of Mechanical Aids Available		
Photo 1	Photo 2	Photo 3
Brief explanation	Brief explanation	Brief explanation
Use mechanical aids where possible		

Assessment of the work environment

To prevent manual-handling injuries, it is essential to keep the work areas in a satisfactory condition. Take the following precautions:

- Maintain a high level of tidiness & housekeeping particularly where loads are being carried.
- Maintain non-slip surfaces and eliminate unnecessary ledges and uneven surfaces which could cause tripping. Tripping during the carrying of a load is a frequent occurrence.
- Design the buildings in such a way that the need for manual handling is eliminated.
- Adequate design of buildings avoids situations where there is not enough room to lift correctly or where awkward postures may be adopted.