Display screen equipment is a term that includes any work equipment that incorporates an electronic visual display of information. The most familiar is the computer workstation that is on the desk of most office workers and many in industry. However, it also includes other equipment that forms part of process controls and other equipment.

Work on DSE is the cause of a range of musculoskeletal injuries, which are the most frequent cause of lost work time in the UK. These include conditions such as carpal tunnel syndrome, tenosynovitis, lower and upper back pain. These can result from repetitive motion when using the keyboard and mouse as well as poor posture.

The risks can be managed by following good ergonomic principles when choosing equipment and designing workstations.

Legal Requirements

The Display Screen Equipment Regulations were introduced in the UK in 1992 to implement the EU Directive. The key requirements of the regulations are as follows.

Assessment
Assessments must be carried out for all employees whose work requires them to use display screen equipment. The assessment must address the following factors:

- The task itself – how much time the employee spends on display screen work each day, how long does an employee work continuously without a break, the degree of concentration which is required, the degree of keyboard and mouse work etc.
- The equipment – the type of screen, keyboard, mouse etc and the ease with which they can be used. Can the screen be easily read, do characters appear on the screen after input, with no delay. Can the screen be adjusted for height, brightness, contrast etc.
- The furniture – is there adequate space to adjust the lay-out of the equipment on the desk. Can the chair be adjusted for height, back support, tilt, seat depth and thigh support.
- The environment – is the lighting, temperature and humidity sufficient to create comfortable working conditions.
- The individual – does the employee have any special feature, e.g. very tall, very short, pre-existing medical conditions, which may mean that specific requirement may be necessary.

Not only should the workers in the office have the DSE work assessed but the regulations also apply to other groups such as:

- Home workers
- Temporary or part-time staff, including agency workers.

There is a requirement to review the assessments periodically or whenever there is a new employee or where there are changes to the activity or the workstation.

The regulations do not specify how the assessments must be carried out but where there is a significant number of employees an on-line system may be most appropriate. This also facilitates the reviews that are required.

Training

Following the assessments, control measures must be put in place, which should be based on good ergonomic principles. All employees should then be educated in the correct use of this equipment and the optimum way to set up their workstation. They must also be informed of the employer’s policies on issues such as eyesight tests, breaks etc.
Best Practice

When considering activities that include the use of DSE, good ergonomic principles should always be followed in the design of the workstation, selection of furniture and equipment and the way the task is carried out. Specifically we should consider:

Seating
- The seat should be height adjustable so that when sat at the keyboard, the employee can have their forearms horizontal so as to minimise the risk of repetitive strain injuries.
- If the user cannot sit with their feet flat on the floor with the seat at this level, a footrest should be provided.
- The seat should have 5 casters for maximum stability.
- The seat back should be height adjustable to provide optimum support in the lumbar and upper back regions.
- The seat base should be capable of being adjusted horizontally to provide support for the thighs. When correctly set, there should be a gap of about two fingers width between the back of the knee and the front of the seat. This will provide the necessary support without causing pressure on the tendons and blood vessels behind the knee.
- The seat should be capable of tilting with the movement of the employee. This ensures that there is consistent back support when sitting in different positions.

Desk
- The desk should have a work surface sufficiently large to accommodate other equipment, e.g. telephones, printer etc, and documents in comfort.
- There should be sufficient room under the desk for the user’s legs to fit comfortably.
- The location of the telephone should take into account the left/right handedness of the user and whether they will be required to key in information while on the phone. A headset may be a consideration for this.
- There may be circumstances, such as where employees are very tall where a height adjustable desk should be considered.

Equipment
- The screen height should be capable of being adjusted so that the top of the screen is level with the user’s eyebrows so that they are looking slightly downward at the screen.
- The screen should be adjustable for brightness and contrast and should be free from glare and flicker.
- The screen should be positioned at arms length from the user.
- If a mouse is used, this should be located close to the side of the keyboard to reduce lateral movement of the arm. It should be moved using the forearm rather than the wrist.
- Laptops should be mounted on risers which bring the screen height up to a similar level to that of a desk top monitor. They should also be provided with a detachable keyboard and a mouse.

Task organisation
- Working at DSE for extended periods should be avoided. As a guide, a break of at least 5 minutes should be taken in every hour.
- Longer breaks of at least 15 minutes should be taken every two hours. These breaks need not be total but can be opportunities to carry out other tasks.

Eyesight
- Although it has been demonstrated that work on DSE does not cause eyesight problems some users may experience problems through the environment conditions or pre-existing eyesight problems.
  - If a user requests it arrangements must be made for them to have an eyesight test at the employer’s cost.
  - If the test shows that corrective glasses are required for DSE work, the employer is required to pay for them or to make contributions to the cost of glasses.
- Some of the problems result from dryness in the atmosphere or continued focussing on the screen. These can be minimised by simple remedies such as blinking or periodically focussing on an object away from the screen.

Other issues
- Although there have been concerns regarding possible effects of radiation on pregnant mothers and unborn children there has been no evidence discovered to support these claims. However, as a pregnancy progresses it is important to review that individual’s assessment as postural adjustments may be necessary at the workstation.

Information provided by Cardinus Risk Management