

Portable Display Screen Equipment:

Guidelines on the use of portable display screen equipment (laptops and notebooks)

Over the last few years, laptops have and are increasingly being used, making communication whilst on the move easier. However, this has also introduced a whole host of new problems, mainly because of their extended use and their use in unconventional environments.

The Health and Safety (Display Screen Equipment) Regulations 1992 cover the use of display screen equipment in the workplace. Prolonged use of a portable computer brings the user under the requirements of these Regulations, and the potential musculoskeletal and other risks should be assessed and minimised in the same manner as for desktop equipment. However, the potential risks associated with portable computer usage are not limited to those normally associated with display screen equipment use. Other risks to consider include manual handling and the possibility of theft amongst others.

Problems associated with laptops:

1. Postural
2. Visual discomfort
3. Handling
 - Laptops have a low level screen and a shorter viewing distance. As a result, users can spend long periods of time looking downwards at an extreme angle (greater forward head inclination and greater neck flexion than work posture with desktop computer use) as they work.
 - Some equipment has very small keyboards (e.g. notebooks), which make it difficult for the operator to adopt a comfortable, relaxed posture.
 - Display screen and keyboard cannot be positioned independently of each other and therefore may make it more difficult to use in a comfortable posture.
 - The handling of the weight of the laptop, the laptop bag and supporting materials would be considered significant under a manual handling assessment.

Guideline to prevent musculoskeletal symptoms:

In order to prevent the commonly reported musculoskeletal symptoms associated with laptop/ portable computer use, such as neck, upper back and shoulder discomfort, the Occupational Health Unit would like to remind users should adhere to the following guidelines.

- Wherever possible users should use a suitable office desk and adjustable chair when they are available.
- For prolonged use, a docking station should be set up. This allows the user to connect the laptop to a standard screen, keyboard and mouse, to achieve a more ergonomic layout and therefore more comfortable postures.
- If a docking station is unavailable explore the options for work with a separate keyboard and mouse, for example a 'Y' cable could be used. It is plugged into the back of the laptop and a standard keyboard and mouse are plugged into the 2 remaining sockets on the end of the fork of the 'Y' cable. The laptop is raised onto a dedicated platform or simply on a raised area at suitable height for the user.
- Minimise the use of trackpoint ("nipples") as input devices.
- Users must take breaks as recommended for general display screen work and transfer to other activities for approx. 10 minutes in every hour. Time spent using a laptop can be greater than using a standard desktop computer, due to an increased error rate caused by differences in trackball positioning leading to slower speed of dragging and pointing and also due to the small key spacings when used by people with large fingertips.
- Consideration should be given to the type of bag used to carry the laptop. Often the original bag can be heavy. A more favourable alternative is the use of backpacks, which should be worn properly – not over one shoulder!
- The bag should be thick, with padded straps at points of contact with the back/shoulders so that the weight is spread out over a larger area.
- Being able to rely on an extended battery life will reduce the need to carry transformers and cables.

The Occupational Health Unit would like to remind users that if equipment is used for long periods of time laptops are no substitute for "standard" desktop display screen equipment (DSE).

A risk assessment of each workstation must be carried out, to meet the regulations and prevent musculo-skeletal problems associated with the use of Display Screen Equipment. DSE risk assessment forms and guidance can be found on the University's Health and Safety website at:

http://www.docs.csg.ed.ac.uk/Safety/health/portable_DSE.pdf