

LAPTOP – GUIDANCE NOTES

Introduction

During recent years the introduction of the portable laptop computer to an increasing number of people has been an advantage in terms of information retrieval and storage. The processing of information on a computer is now a fundamental part of every day working life. The use of laptop computer however may have a detrimental effect on personal ergonomics unless adequate guidance and training is made available to all users.

Research has shown a marked increase in the type of problems normally associated with Display Screen Equipment e.g, musculo-skeletal problems, visual fatigue etc., and it is thought that these conditions could be exacerbated by the use of portable laptop computers.

For example, laptop computers do not usually include screen/keyboard separation. Laptops also tend to have small keyboards which may promote bad posture bad posture and poor technique.

This guidance provided for laptop computers should be read in conjunction with ‘Display Screen Equipment’.

Legislation

The Health and Safety (Display Screen Equipment) Regulations 1992 were introduced to provide a minimum legal standard that should apply to Display Screen Equipment (DSE) and its associated work environment and work activities.

The Regulations require that an analysis of workstations to establish risks presented to employees using them is undertaken. Risks arising from the use of DSE include musculo-skeletal discomfort; work related upper limb disorders (WRULDs); visual disturbance and stress. This legislation applies to all forms of computer, whether a desk bound PC, a laptop or a notebook computer.

Medical Conditions associated with /caused by Repetitive Strain

CARPAL TUNNEL SYNDROME

One of the most common and well known forms of RSI, Carpal Tunnel syndrome is caused by pressure exerted on the median nerve in the wrist. The median nerve enters the hand through the carpal tunnel and, if the surrounding tissue is swollen, this compresses the nerve causing pain in the wrist and a tingling sensation in the fingers.

THORACIC OUTLET SYNDROME

The Thoracic outlet is located in the shoulder just behind the collar bone. Thoracic Outlet Syndrome (TOS) is associated with numbness, tingling, weakness or pain in the hand and arm. It is due to tension being inflicted upon the nerves or blood vessels that supply the arm. Tight muscles, ligaments, or skeletal irregularities in the thoracic outlet region bring about this pressure.

TENDONITIS

Tendonitis occurs when there is inflammation or irritation of a tendon. It can lead to pain, swelling, stiffness, and loss of co-ordination in the relevant region of the body. Various conditions exist including 'trigger finger' and problems associate with the thumb.

Before you Buy

There are various points to consider before selecting a laptop computer:

- As a large screen as possible, e.g. 14 inch diagonal or more.
- Detachable or height adjustable screen.
- Touch pad, rolllerball or external mouse in preference to 'nipple' trackpoint device located on the keyboard.
- Wrist rest area between keyboard and front edge of laptop.
- Tilt adjustable keyboard.
- Friction pads underneath to prevent slipping.
- Facility for external devices such as keypad, mouse, docking station etc.
- Sufficient memory and speed for the applications being used.
- Advice should be sought from IT regarding the suitable software required.

Manual Handling and Lifting

The weight of the laptop and all the accessories required for operation should be a prime consideration before purchase e.g. lighter alternatives. Chargers and spare batteries, if required, add a considerable weight.

Try to avoid carrying hard copies of files which are on the computer. The computer should be carried in a carry case using a padded shoulder strap or a wheeled luggage carrier. The weight of the computer and accessories should be well within the physical capabilities of the person being asked to carry it.

Personal Safety and Security

The carrying of portable computers in public places had led to an increase of theft and attacks on individuals. The following guidelines will help to minimise these occurrences:

- Use unmarked carry cases.
- Park as near as possible to the office.
- Use well lit areas and travel in pairs if possible.
- If challenged, hand the computer over.
- Lock the computer in the boot even if you are in the car.
- Security code the computer
- Take regular back ups of data and password protect.

Equipment Safety

The equipment should be included within the regime of inspection and test as detailed within the Electricity at Work Regulations 1989. The equipment is classified as 'Portable Equipment' and should have a formal visual and technical inspection in accordance with Electrical Equipment Guidance Note found in your NYCC Health and Safety Handbook.

In addition to the above the user should make regular checks of the following:

- Damage, e.g. cuts, abrasions (apart from light scuffing) to the cable covering.
- Check for loose wires
- Damage to the plug e.g. cracked or the pins bent.
- Non-standard joints, e.g. taped cables
- Ungripped outer covering visible where the cable enters the plug
- Unsuitable conditions e.g. wet or dusty environments
- Loose parts or screws
- Evidence of overheating/burn marks
- Ensure that trailing cable do not present a trip hazard for yourself or others

If any problems are noted, the equipment should not be used and the problems reported to your line manager immediately.

Posture

- Never use when on your lap, apart from poor posture the equipment gets hot and may burn the skin even through clothing
- Always use a desk and chair. Avoid easy chairs and coffee tables
- If you have to use the computer in the car always sit in the front passenger seat, pushed back and ensure the computer is placed on top of the computer case to raise it to an acceptable level.
- Avoid slouching and sitting forward in a 'curled' position
- Try not to put the laptop on the edge of the desk as this will cause you to look down putting undue level with your eyes
- Do not lean or bend to one side as this will put undue strain on your back
- Position the laptop to minimise glare and reflection
- Keep the screen clean and free from static
- Check your posture regularly
- Avoid sitting too high or too low to minimise the risk of strain injuries, use a height adjustable chair to achieve this if possible
- Try to keep your forearms roughly horizontal to minimise the bend in your wrists
- Always use a mouse or glide pad so that the hand remains flat and fingers relaxed

Docking Stations

Whenever laptops are used in an office environment the preferred method is to use either a separate PC or a docking station. Docking stations are a separate keyboard which a laptop can be plugged in to with an adjustable elevated platform which houses the laptop.

The docking station would enable the laptop to be viewed at a more acceptable height and allow the keyboard to be adjusted separately from the screen.

Laptop Stands

Laptop stands are available and these allow the laptop to be inclined which improves the posture considerably. Many stands offer adjustable height and storage facilities such as small drawer units.

DSE Assessment

The Regulations require that an assessment is undertaken of each workstation used. The self-assessment form contained within 'Display Screen Equipment Guidance Note' in your NYCC Health and Safety Handbook can be used by each workstation user or operator to identify any issues or problems regarding their workstation.

The form should be used by a manager or supervisor to assess a workstation that is to be provided to a new user – although once the user commences work they should complete a self assessment form. Any issues raised on the assessment form need to be addressed initially by the employees line manager.

Provision of Information and Training

Any person using DSE must be provided with sufficient information regarding the safe use of their workstation. This would include the provision of eye or eye sight tests where applicable.

The minimum standards required for workstations and the need for users to vary their duties so they have regular breaks from their computer. Training may need to be given in the use of software applications and in the process for setting up a workstation.