

The use of a laptop or notebook computers is widespread, and many people use them regularly as part of the work process.

Regulation 1(4)(d) of the Health and Safety (Display Screen Equipment) Regulations 1992 states that the regulations do not apply to or in relation to portable systems not in prolonged use. However, where a laptop is used regularly by people as a significant part of their day-to-day work, then these regulations will apply. In many cases employers will use the 'one-hour' rule, i.e. if a laptop is used continually for one hour or more then the employee will be classified as a user.

T.F.Tull gives consideration as to the use of laptops, particularly if there is a realistic alternative, i.e. use of a desktop system for personal use or 'hot desking' for intermittent use where no permanent workstation is available.

### ***Risks relating to the use of Laptops***

There are three main categories for risk associated with laptop use:

- ***Equipment Design:*** The equipment is designated for portable use and as a result compromises have had to be made. This leads to smaller keyboards and screens, differing pointer devices or mouse, as well as lack of adjustability. As a result, laptops tend to be uncomfortable in prolonged use.
- ***The environment that they are to be used in:*** The work environment where laptops are used tends to be less 'user friendly' than the office environment. Areas are often constricted, such as trains, in cars, at home etc, which does not allow the user to work comfortably for any lengthy period.
- ***Physical demands upon the user:*** The arrangement of the keyboard and screen usually leads to the user working with their head and shoulders bent forward and adopting an awkward arm, wrist and hand position to key information in or to read the screen. Wherever possible the good practices adopted with the use of desktop computers should be utilised when using a laptop computer. The human body is not designed to be static for long periods of time and it is important that the laptop user varies their work position on a regular basis as well as taking frequent breaks.

### ***Best Practice – The Equipment***

- ***Sitting:*** With the use of a laptop computer there will always be a trade-off between achieving a comfortable keying position and placing the screen at a viewing distance that is comfortable to the user. Posture is important, and the user should not sit forward in a hunched position. Seating should preferably be such that a good position can be achieved which will prevent aches and pains in the small of the back or legs. Wherever possible an adjustable chair should be used such that it will allow the user to sit far enough back so that the lower part of the back is supported by the backrest. Where this is not possible, i.e. a non-adjustable chair is being used, then a cushion or pillow can be used to support the back of the user. Chair height is important and when seated the user's forearms should be roughly horizontal when the hands are on the keyboard. If using a non-adjustable chair then again, seat height can be varied using cushions.
- ***Use of the Laptop keyboard:*** When using the keyboard, the user should avoid any awkward bending of the wrists. Sitting too high or too low will lead to the wrists being in a bent position. Chair should be positioned so that a neutral keying position is obtained, i.e. that the

forearms, wrists and hand are in a straight line. It is important for the user to sit upright as this will reduce stress on the head and neck. Pushing the keyboard back a little can help in this situation. It is preferable to use the laptop on a desk or table so that with the arms resting on the work surface it should be possible to keep the wrists in a relaxed, neutral position.

- **Using a laptop mouse:** Although laptops come equipped with an integral mouse, for prolonged usage it is best practice to use a separate mouse. If the laptop mouse is to be used, then it is advisable not to screw up the fingers into a claw position or hold them in the air. Hands should be kept flat, and the fingers relaxed when using a trackball, glide pad or nipple operated mouse.
- **The laptop screen:** Glares and reflections on a computer screen should be avoided wherever possible. A laptop should be positioned such that these do not occur. Where a window is causing reflections then the laptop should be repositioned or if there are curtains or blinds to the window these should be used. The angle of the screen can affect the amount of glare and reflection that can be picked up. A compromise may have to be made between glare, reflections and the most comfortable viewing angle. If a free-standing monitor can be used either with or without a docking station, then this can be much better. It also always helps to keep the laptop screen clean.

### **Best Practice – The Environment:**

A laptop, because of its portability, will be used in many different environments.

- If using a laptop at home, then it is important to find a suitable work area that has both a comfortable chair and a desk/table to place the laptop on. Sitting on the edge of a sofa or armchair is not suitable because of the posture problems that this can cause. If the chair will not support your back, then use a cushion to assist. Again, use a cushion to give more height if the chair will not adjust.
- It is not considered good practice to use a laptop when lying on a bed or couch. If you are lying on your back, then your neck will be in an awkward position as you try to see the screen. Equally, if you lie on your front then you will be putting strain on the lower part of the back as your body bends at the waist.
- If you use your laptop whilst in a car then under no circumstances should you use it whilst driving. Wherever possible you should sit upright in the passenger seat with the seat pushed well back. You can then rest the laptop on a flat surface such as a briefcase, which helps to raise the laptop height as well as giving improved keying position for the wrist and hands.
- The use of laptops on trains and planes has become more prevalent. However, the risks here to the user are usually increased due to lack of space. In most cases the laptop will have to be positioned close to the user and the poor posture that results may well lead to the onset of aches and pains in the back, neck and forearm. In this situation the laptop should be used as little as possible.

### **Manual Handling**

Laptop computers vary in size and weight. In many instances these are accompanied by the use of peripherals such as portable printers. Manual handling becomes an issue because of the portability of both the computer equipment and any associated manuscript documentation. Whilst the laptop and any associated printer will usually have a carrying case of some description, the overall weight and methods of transportation need to be considered.

# LAPTOP HEALTH AND SAFETY POLICY

Carrying cases of the types with single shoulder straps can put strain on the back muscles if equipment is carried for any distance or for any long period of time. If a briefcase is also carried, then the overall weight plus the awkwardness of the resulting load can be a problem. The use of a backpack is more advantageous. Consideration should be given to the use of a hand trolley as a means of making transportation easier.

## **Security**

The security of personnel who carry laptops is of prime importance.

Laptops are expensive and there is always a risk of theft or mugging in some circumstances. This can be tackled by a combination of user training and task design, e.g.:

- Train all users to take sensible precaution such as not carrying portables in luggage with a computer manufacturer's branding on it.
- Do not leave equipment where it is visible in a parked car.
- Take extra care in public places or in other situations where the risk of theft may be greater.

## **User/ Risk Assessment**

People who use a laptop as a significant part of their day to day work are subject to the requirements of the DSE Regulations. In this instance it is important to determine which people who use a laptop can be considered as 'users' and thus come under the regulations. Employees should complete a self-assessment DSE questionnaire.

Any subsequent risk assessment should consider how much time an individual spends using the laptop and what kind of environment it is to be used in. Attempts should be made to reduce the amount of use by allowing the tasks to be carried out in alternative ways. If this is not possible then methods of reducing or controlling any risks associated with the use should be examined.

It must also be remembered that laptop users who use them significantly as part of their day to day activities should be offered eye tests etc in the same way as for desktop users.

Issues T.F.Tull will consider when conducting a risk assessment:

- How often the laptop is used
- Where it is used
- Manual Handling i.e. the carriage of the equipment plus any peripherals etc
- Personal Security



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