

# Working with VDUs



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## Introduction

This leaflet is a guide for people who work with visual display units (VDUs), and their employers. It:

- answers questions that are most often asked about VDUs and health (see page 1);
- gives a summary of the law on VDU work (the Health and Safety (Display Screen Equipment) Regulations 1992), and outlines what employers and employees should do to comply (see page 4);
- suggests some simple adjustments that users can make to workstations and screens to make them more comfortable and easy to use (see page 5); and
- explains how employers and users can get further advice (see page 7).

## What's the difference between a VDU, a VDT, a monitor and display screen equipment (DSE)?

There isn't one. All these terms mean the same thing - a display screen, usually forming part of a computer and showing text, numbers or graphics.

This booklet gives advice on health and safety in working with such screens. It covers both conventional (cathode ray tube, TV-style) screens and the newer flat-panel displays such as those used in portable computers.

The advice in this booklet applies to the whole workstation, job and work environment, as well as to the VDU, keyboard and other equipment.

## 'Does my VDU affect my health?'

*Answers to some common questions from VDU users*

### **Am I at risk?**

VDUs have been blamed - often wrongly - for a wide range of health problems. In fact, only a small proportion of VDU users actually suffer ill health as a result of their work. Where problems do occur, they are generally caused by the way in which VDUs are being used, rather than the VDUs themselves. **So problems can be avoided by good workplace and job design, and by the way you use your VDU and workstation.**

### **Are aches and pains caused by using a VDU? What about 'RSI'?**

Some users may get aches and pains in their hands, wrists, arms, neck, shoulders or back, especially after long periods of uninterrupted VDU work. 'Repetitive strain injury' (RSI) has become a popular term for these aches, pains and disorders, but can be misleading - it means different things to different people. A better medical

name for this whole group of conditions is 'upper limb disorders'. Usually these disorders do not last, but in a few cases they may become persistent or even disabling.

#### *How can I avoid these aches, pains and disorders?*

Problems of this kind may have a physical cause, but may also be more likely if a VDU user feels stressed by the work (see next question). If you get aches or pains you should alert your supervisor or line manager.

Problems can often be avoided by good workplace design, so that you can work comfortably, and by good working practices (like taking frequent short breaks from the VDU). Prevention is easiest if action is taken early, before the problem has become serious. For more about how to avoid trouble, see 'Making adjustments to suit your needs' on page 5.

#### *What can be done to reduce stress in my VDU work?*

People who use a VDU sometimes complain of stress, but this usually arises from increased pace of work or pressure to meet deadlines, not the VDU itself. Some VDU workers find stress reduced because the VDU makes their job easier or more interesting, but for others stress becomes worse. This can happen when a system does not work well or when the user does not feel in control or competent to operate it.

Employers can help overcome stress by providing the right training, and by designing systems and tasks to match the abilities of the people who work with them.

#### *Can work with VDUs affect eyesight?*

Extensive research has found **no evidence that VDUs can cause disease or permanent damage to eyes**. But long spells of VDU work can lead to tired eyes and discomfort. Also, by giving your eyes more demanding tasks, it might make you aware of an eyesight problem you had not noticed before. You and your employer can help your eyes by ensuring your VDU is well positioned and properly adjusted, and that the workplace lighting is suitable. Ask for an eye test if you still think there is a problem.

#### *What about problems with my contact lenses or bifocals?*

The heat generated by computers and other equipment can make the air seem drier, and some **contact lens** wearers find this uncomfortable. If you have this problem but don't want to change to spectacles, you can try blinking more often or using tear-substitute drops. Where the air is dry, employers can help by taking steps to increase the humidity.

People with **bifocal spectacles** may find them less than ideal for VDU work. It is important to be able to see the screen easily without having to raise or lower your head. If you can't work comfortably with bifocals, you may need a different type of spectacles. Consult your optician or doctor if in doubt.

#### *Can VDU work cause headaches?*

Headaches may result from several things that occur with VDU work, such as:

- screen glare;
- poor image quality;
- a need for different spectacles;
- stress from the pace of work;
- anxiety about new technology;
- reading the screen for long periods without a break;
- poor posture; or
- a combination of these.

Many of these things can easily be put right once the cause of the problem has been found.

***How long should I work with a VDU?***

There is no legal limit, but you need to break up long spells of VDU work. How long you should work without a break depends on the type of work you are doing. See pages 4 and 6 for further information.

***Do VDUs give out harmful radiation?***

No. VDUs give out both visible light, which enables us to see the screen, and other forms of electromagnetic radiation which can be harmful above certain levels. However, the levels of radiation emitted from VDUs are well below the safe levels set out in international recommendations. So your employer doesn't have to check radiation levels from your VDU, and you do not need any special devices such as spectacles, screens or aprons when using it.

***What should I do if I'm pregnant?***

You don't need to stop working with VDUs. Past concern, about reports of miscarriages and birth defects among some groups of VDU workers, has not been borne out by more recent research. Many scientific studies have now been carried out and, taken as a whole, these do **not** show any link between miscarriages or birth defects and working with VDUs.

If you are anxious about your VDU or about work generally during pregnancy, you should talk to your doctor. Or you could talk to someone who is well informed about current scientific information and advice on VDUs.

***Can working with VDUs cause skin disorders?***

This is rare. A few people have experienced irritation, rashes or other skin problems when working with a VDU. The exact cause is not known, but it seems possible that a combination of dry air, static electricity and individual susceptibility may be involved. If this is the case, increasing the humidity or allowing more fresh air into the room may help.

***Can VDUs trigger epileptic fits?***

Most people with epilepsy are completely unaffected by VDUs. A few who suffer from photo-sensitive epilepsy and are susceptible to flickering lights and striped patterns may be affected in some circumstances. But even they can often work successfully with VDUs without provoking an attack.

***I use a portable computer - are there any precautions I should take?***

Laptops and other portables have to be compact and easy to carry. The resulting design features, like small keyboards, can make prolonged use uncomfortable, unless steps are taken to avoid problems, eg by using a docking station.

It is best to avoid using a portable on its own if full-sized equipment is available. And like other VDU users, people who habitually use a portable should be trained how to minimise risks. This includes sitting comfortably, angling the screen so it can be seen clearly with minimal reflections, and taking frequent breaks if work is prolonged. Wherever possible, portables should be placed on a firm surface at the right height for keying.

***Is it true that using a mouse can cause problems?***

Intensive use of a mouse, trackball, or similar pointing device may give rise to aches and pains in the fingers, hands, wrists, arms or shoulders. This can also happen with a keyboard, but mouse work concentrates activity on one hand and arm (and one or two fingers), and this may make problems more likely. Risks can be reduced by adopting a good posture and technique - see pages 5 and 6.

Try to limit the time you spend using the mouse. Take frequent breaks - even short pauses to relax your arm can help, as can spells using the keyboard or doing non-computer work. Place the mouse close, so it can be used with a relaxed arm and straight wrist. It can help to support your arm, for example on the desk surface or arm of a chair. If you still find using the mouse awkward, you could try a different shaped or sized one, or another device such as a trackball.

## The Regulations and how they affect you

The Health and Safety (Display Screen Equipment) Regulations 1992 implement an EC Directive and came into effect from January 1993 (some small changes were made in 2002). The Regulations require employers to minimise the risks in VDU work by ensuring that workplaces and jobs are well designed.

### *Who is affected?*

The Regulations apply where staff habitually use VDUs as a significant part of their normal work. Other people, who use VDUs only occasionally, are not covered by the requirements in the Regulations (apart from the workstation requirements). However, their employers still have general duties to protect them under other health and safety at work legislation.

### *I am self-employed - am I covered?*

The Regulations do not place any duties on the self-employed. However, parts of them apply if you habitually use a VDU for a significant part of your normal work and are using a client employer's workstation. The client employer has to assess and reduce risks, ensure the workstation complies with the minimum requirements and provide information, as if you were an employee. But there is no requirement for employers to plan work breaks, or provide eye tests or training for the self-employed.

### *I work at home - am I covered?*

Yes, the Regulations apply if you are an employee working at home, and habitually using a VDU for a significant part of your normal work.

## What do employers have to do to comply?

The Regulations do not contain detailed technical specifications or lists of approved equipment. Instead, they set more general objectives.

Employers have to:

### *Analyse workstations, and assess and reduce risks*

Employers need to look at:

- the whole workstation including equipment, furniture, and the work environment;
- the job being done; and
- any special needs of individual staff.

Employees and safety representatives should be encouraged to take part in risk assessments, eg by reporting health problems. Where risks are identified, the employer must take steps to reduce them.

### *Ensure workstations meet minimum requirements*

These requirements are good features that should normally be found in a workstation, such as adjustable chairs and suitable lighting. They are set out in a schedule to the Regulations, covering screens, keyboards, desks, chairs, the work environment and software. All workstations covered by the Regulations now have to comply, to the extent necessary for the health and safety of workers (a transitional period for modification of older workstations expired at the end of 1996).

### *Plan work so there are breaks or changes of activity*

As the need for breaks depends on the nature and intensity of the work, the Regulations require breaks or changes of activity but do not specify their timing or length. However the guidance on the Regulations explains general principles, for example short, frequent breaks are better than longer, less frequent ones. Ideally the individual should have some discretion over when to take breaks.

### *On request arrange eye tests, and provide spectacles if special ones are needed*

Employees covered by the Regulations can ask their employer to provide and pay for an eye and eyesight test. This is a test by an optometrist or doctor. There is also an entitlement to further tests at regular intervals; the optometrist doing the first test can recommend when the next should be. Employers only have to pay for spectacles if special ones (for example, prescribed for the distance at which the screen is viewed) are needed and normal ones cannot be used.

### *Provide health and safety training and information*

Employers have to provide training, to make sure employees can use their VDU and workstation safely, and know how to make best use of it to avoid health problems, for example by adjusting the chair.

Information should also be provided about VDU health and safety. This should include general background information - this could be done by giving out copies of this booklet. It should also cover more specific details of the steps taken by the employer to comply with the Regulations, such as the action taken to reduce risks and the arrangements for breaks.

***Details of more comprehensive HSE guidance publications on the Regulations are given on page 7.***

## Making adjustments to suit your needs

### **What can I do to help myself?**

Make full use of the equipment provided, and adjust it to get the best from it and to avoid potential health problems. If the Regulations apply to you, your employer should cover these things in training. If the Regulations don't apply, it is still worth setting up your workstation properly, to be as comfortable as possible.

Here are some practical tips:

#### ***Getting comfortable***

- Adjust your chair and VDU to find the most comfortable position for your work. As a broad guide, your forearms should be approximately horizontal and your eyes the same height as the top of the VDU.
- Make sure you have enough work space to take whatever documents or other equipment you need.
- Try different arrangements of keyboard, screen, mouse and documents to find the best arrangement for you. A document holder may help you avoid awkward

neck and eye movements.

- Arrange your desk and VDU to avoid glare, or bright reflections on the screen. This will be easiest if neither you nor the screen is directly facing windows or bright lights. Adjust curtains or blinds to prevent unwanted light.
- Make sure there is space under your desk to move your legs freely. Move any obstacles such as boxes or equipment.
- Avoid excess pressure from the edge of your seat on the backs of your legs and knees. A footrest may be helpful, particularly for smaller users.

### *Keying in*

- Adjust your keyboard to get a good keying position. A space in front of the keyboard is sometimes helpful for resting the hands and wrists when not keying.
- Try to keep your wrists straight when keying. Keep a soft touch on the keys and don't overstretch your fingers. Good keyboard technique is important.



## Reading the screen

### *Using a mouse*

- Position the mouse within easy reach, so it can be used with the wrist straight. Sit upright and close to the desk, so you don't have to work with your mouse arm stretched. Move the keyboard out of the way if it is not being used.
- Support your forearm on the desk, and don't grip the mouse too tightly.
- Rest your fingers lightly on the buttons and do not press them hard.

### *Reading the screen*

- Adjust the brightness and contrast controls on the screen to suit lighting conditions in the room.
- Make sure the screen surface is clean.
- In setting up software, choose options giving text that is large enough to read easily on your screen, when you are sitting in a normal, comfortable working position. Select colours that are easy on the eye (avoid red text on a blue background, or vice-versa).
- Individual characters on the screen should be sharply focused and should not flicker or move. If they do, the VDU may need servicing or adjustment.

### Posture and breaks

- Don't sit in the same position for long periods. Make sure you change your posture as often as practicable. Some movement is desirable, but avoid repeated stretching to reach things you need (if this happens a lot, rearrange your workstation)
- Most jobs provide opportunities to take a break from the screen, eg to do filing or photocopying. Make use of them. If there are no such natural breaks in your job, your employer should plan for you to have rest breaks. Frequent short breaks are better than fewer long ones.

## More information and advice

The Health and Safety Executive (HSE) has published two other guidance booklets giving detailed information on the Display Screen Equipment Regulations. Employers in particular may wish to consult one of them. The two booklets are:

- ***The law on VDUs: An easy guide: Making sure your office complies with the Health and Safety (Display Screen Equipment) Regulations 1992 (as amended in 2002)*** HSG90 HSE Books 2003 ISBN 0 7176 2602 4

This is the booklet HSE recommends for most employers who have staff using standard VDUs in offices. It gives practical guidance, in plain language, on how to comply with the Regulations with a minimum of effort and expense. It is illustrated in colour and includes a checklist for workstation assessment.

Note: additional copies of the *VDU workstation checklist* are available in priced packs of 5, ISBN 0 7176 2617 2.

- ***Work with display screen equipment. Health and Safety (Display Screen Equipment) Regulations 1992 as amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002. Guidance on regulations*** L26 (Second edition) HSE Books 2003 ISBN 0 7176 2582 6

This booklet in HSE's Legal series gives comprehensive guidance on interpretation of each part of the Regulations. It includes the text of the Regulations themselves, including the 2002 amendments. It will be of most interest to employers who need to check the detail of particular requirements, or anyone who wants advice on application of the Regulations to display screen equipment other than ordinary VDUs in offices.

All these publications are available from HSE Books (see back cover) or booksellers.

### What should I do if I have any problems?

If you are a VDU user and think you have health problems connected with your work, it's best to talk to your supervisor, manager or safety representative first. Employers have a duty to consult their employees or employee representatives on health and safety issues. It is good practice for employers to encourage early reporting of health problems, help sufferers obtain treatment they need, and help them return to work.

If this doesn't help, VDU users and employers can get advice from the relevant authority:

- For VDU work in an office, shop or hotel: contact the Environmental Health Department at your local council.
- For other premises (and government offices): contact your nearest local office of the Health and Safety Executive, as listed in the telephone directory.

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For information about health and safety ring HSE's Infoline Tel: 0845 345 0055  
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**This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.**

This leaflet is available in priced packs of 10 from HSE Books, ISBN 0 7176 6222 5. Single copies are free and a web version can be found at [www.hse.gov.uk/pubns/indg36.pdf](http://www.hse.gov.uk/pubns/indg36.pdf).

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