

# The Safety Facts About Working With VDUs

*Expert knowledge means success*

## **Contents**

1. Introduction
  1. What's the difference between a VDU, a VDT, a monitor and display screen equipment (DSE)?
  1. Answers to some common questions from VDU users
  3. The Regulations and how they affect you
  4. What do employers have to do to comply?
  4. Making adjustments to suit your needs
  5. More information and advice
  6. What should you do if you have any problems?
  6. Further Information

## Introduction

We all live in an age in which the use of computers is commonplace. Sitting in front of a computer screen is, for many people, a daily occurrence. Some people have expressed concern about the possible dangers of working for long periods of time with computers.

This publication 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. It gives simple, practical advice provided by the UK Health and Safety Executive (HSE) on what can be done to eliminate or reduce the risks. It also:

- provides information on good practice which are not compulsory but which you may find helpful in considering what you may need to do;
- 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;
- suggests some simple adjustments that users can make to workstations and screens to make them more comfortable and easy to use; and
- explains how employers and users can get further advice.

## 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 Information Sheet 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 given, is derived from information from the HSE and applies to the whole workstation, job and work environment, as well as to the VDU, keyboard and other equipment.

## 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.

### Does using a VDU cause aches and pains? 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.



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

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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?

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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. You should ask for an eye test if you still think that there's a problem.

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

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The heat generated by VDUs 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?

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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?

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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. Plan work so there are breaks or changes of activity.

## Do VDUs give out harmful radiation?

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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?

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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?

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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?

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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?

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Laptops and other portable computers have to be compact enough to be easy to carry. This results in design compromises, like smaller keyboards and screens, that make portables less comfortable in prolonged use than a normal VDU.

It is best to avoid using a portable for long periods when 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?

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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. Adopting a good posture and technique can reduce risks.

Make the most of opportunities to take breaks from intensive mouse work - even short pauses can help, as can spells doing keyboard or non-computer work. If you use a mouse a lot, you can try changing from right

to left-handed use (and vice-versa) from time to time. It can also help to take your hand off the mouse during short pauses and let your mouse arm hang straight down from your shoulder. If you find gripping your mouse awkward, you could try a different shaped or sized one.

## The Regulations and how they affect you

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

### Who is affected?

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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 these Regulations, but their employers still have general duties to protect them under other health and safety at work legislation.

### Are the self-employed covered?

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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 to provide eye tests or training for the self-employed.

### Are those who work at home covered?

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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 (whose views may be sought as part of the assessment).

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 might be done by giving out copies of the HSE booklet or this Information Sheet. 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 later.

## Making adjustments to suit your needs

You can help yourself by making full use of the equipment provided, and adjusting 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.

### Benefit in kind anomaly removed

Employers are required by law to meet the cost of eye care tests and/or corrective glasses for VDU use for their employees and, where they do so, no benefit in kind charge normally arises. However, prior to 6 April 2006 the exemption applied only to employers meeting these costs directly, and not where they were either reimbursed to the employees, or where the employees were provided with a voucher to pay for the glasses or eye test.

This anomaly was corrected in the Budget 2006 so that from 6 April 2006 eye care and corrective glasses provision for VDU users will not be a taxable benefit regardless of whether an employer pays for the provision directly, through a voucher, or simply reimburses the cost.

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 workspace 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.

## 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, e.g. 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:

**VDUs: An easy guide to the Regulations**  
HSG90 HSE Books 1994 ISBN 0 7176 0735 6  
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 checklist are available in priced packs of 10, ISBN 0 7176 0804 2.

**Display screen equipment work. Health and Safety (Display Screen Equipment) Regulations 1992. Guidance on Regulations**

L26 HSE Books ISBN 0 7176 0410 1  
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. It will be of most interest to employers who need to check the detail of particular requirements,

## Survey reveals poor desk health

An online survey of 1,500 UK office workers, conducted in February 2007 by Visual Display Manufacturer ViewSonic, has revealed a clear link between poor ergonomics knowledge and an increase in symptoms such as headaches, eye fatigue and backache.

The study revealed that:

- 46% of office workers spend six or more hours in front of their computer screens a day, of which 51% of these are not scheduling appropriate breaks;
- 67% of workers report suffering from headaches;
- 77% of workers report suffering from eye fatigue;
- 71% of workers report suffering from backache;
- work-induced stress and anxiety is an issue for 78% of office workers;
- users of CRT monitors are twice as likely to have frequent headaches than users of widescreen LCD monitors;
- 16-24-year-olds work the longest screen hours, are least likely to be scheduling appropriate breaks and are one-and-a-half times more likely to suffer headaches (76%) than those aged over 55 (48%).

**Source:**  
[www.viewsonic.com/](http://www.viewsonic.com/)

or anyone who wants advice on application of the Regulations to display screen equipment other than ordinary VDUs in offices.

These publications are available from HSE Books (see below) or booksellers.

## What should you do if you 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.

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.

HSE priced and free publications are available by mail order from:

HSE Books,  
PO Box 1999,  
Sudbury,  
Suffolk CO10 6FS  
Tel: 01787 881165 Fax: 01787 313995

HSE priced publications are also available from good booksellers.

For other enquiries ring HSE's InfoLine Tel: 0541 545500, or write to:  
HSE's Information Centre,  
Broad Lane,  
Sheffield S3 7HQ

## Further Information

This guide is for general interest - it is always essential to take advice on specific issues. We believe that the facts are correct as at the date of publication, but there may be certain errors and omissions for which we cannot be responsible.

If you would like to receive further information about this subject or other publications, please call us – see our contact details on the next page.

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