

JOINT NEGOTIATING COUNCIL FOR THE EDUCATION AND LIBRARY BOARDS

26 July 1999

PW/PM

**To: Chief Executives
Council Members
MSO/TUSO**

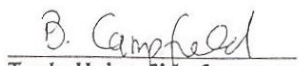
Joint Negotiating Council Circular No. 22


Working with V D Us

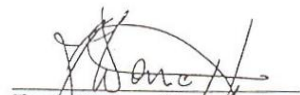
The Joint Negotiating Council at its meeting on the 29 March 1999 agreed that the former A E C P & T Council Circular No. 387, which relates to Working with V D Us, should apply to all employees with immediate effect.

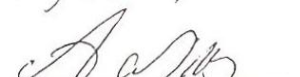
A copy of the document is attached.


Management Side Secretary
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WORKING WITH VDUs

WORKING WITH VDUs

The introduction of VDUs and other display screen equipment has been associated with a range of symptoms related to the visual system and working posture. These often reflect bodily fatigue. They can readily be prevented by applying ergonomic principles to the design, selection and installation of display screen equipment, the design of the workplace, and the organisation of the task.

The purpose of this circular is to give guidance on the implementation of the EC Directive on Display Screen Equipment.

Acknowledgement to HMSO

Questions and Answers

1. Do VDUs give off radiation?

Yes, visible light is a form of radiation which enables us to read the screen, but sensitive instruments can also detect other forms of radiation.

2. Can the radiation from a VDU be harmful to health?

Most of the radiation emitted by VDUs is very much less than that from natural environmental sources such as the sun and all is well below the levels considered harmful by responsible expert bodies such as the NRPB (National Radiological Protection Board) in the UK.

3. What are the effects on pregnant women?

There has been considerable public concern about reports of higher levels of miscarriage and birth defects among some groups of VDU workers in particular due to electromagnetic radiation. Many scientific studies have been carried out, but taken as a whole their results do not show any link between miscarriages or birth defects and working with VDUs. Research and reviews of the scientific evidence will continue to be undertaken.

To avoid problems caused by stress and anxiety, women who are pregnant or planning children and worried about working with VDUs can request a transfer with no change in salary to other duties during the course of the pregnancy.

4. Does the radiation from a VDU increase as the VDU gets older?

As a VDU ages it is more likely to develop faults such as drift and jitter of the images on the screen. It is also possible that the brilliance control will need to be turned up but this does not mean that there will be any increase in the other, non-visible, radiation. Machines should be serviced if there is deterioration in the visual image but there is no need for periodic radiation checks. If you are concerned about deterioration of the visual image on any VDU report the matter to your supervisor or to the Computer Development Officer who will arrange for a maintenance check and repair to be carried out.

5. Is using a VDU any different from watching television?

Yes it is. Although the display may use the same technology, VDUs are normally manufactured to higher standards than TV sets. However, you look much more closely at a VDU and the images tend to be smaller and made up of words rather than pictures. This makes it more important to get the environment right and ensure that the VDU is adjusted properly.

6. Is there a limit to the amount of time I should work on a VDU?

Most types of continuous or sustained work may lead to a build-up of fatigue. In many jobs there are natural breaks when you can move about or do something

different. Jobs should be designed to allow such changes in activity but if this is not possible short, frequent breaks seem to prevent fatigue. Being able to choose when to take a break is preferable to having fixed rest break schedules. The board considers that no member of staff should use a VDU constantly for more than 45 minutes in any hour. As most jobs will require officers to refer to files, papers, take telephone calls etc. it would be unusual for anyone to find it necessary to be constantly operating a screen for this length of time.

7. Can my eyes or eyesight be damaged by working with a VDU?

Medical evidence shows that using display screen equipment is not associated with damage to eyes or eyesight, nor does it make existing defects worse. But some workers may experience **temporary** visual fatigue, leading to a range of symptoms such as impaired visual performance, red or sore eyes and headaches, or the adoption of awkward posture which can cause further discomfort in the limbs. These may be caused by:-

- a. staying in the same position and concentrating for a long time;
- b. poor positioning of the display screen or source document;
- c. poor legibility of the screen or source document;
- d. poor lighting, including glare and reflection;
- e. a drifting, flickering or jittering image on the screen.

Like other visually demanding tasks, VDU work does not cause eye damage but it may make workers with pre-existing vision defects more aware of them. Such uncorrected defects can make work with a display screen more tiring or stressful than would otherwise be the case.

8. What is my entitlement to eye or eyesight tests?

The board has agreed that persons who use VDU's for a significant period will be entitled to an eyesight test when they first become a user, that is when such equipment is introduced into their work or they take up duties which involve using such equipment for a significant period of time. The agreement also provides for such 'users' to be re-examined at regular intervals to check on the need for any special corrective appliances necessary as a result of working at VDUs. Normally such re-testing will be on a bi-annual basis.

9. What if, after examination, I am advised by an optician that I require special corrective appliances?

Where the optician specifies that special corrective appliances i.e. spectacles or contact lenses, are needed to meet the requirements of the regulations, namely (a) normal corrective appliances cannot be used; (b) the result of any eye and eyesight test which the user has been given in accordance with this regulation shows such provision to be necessary, the Board will make an allowance of £55.00 towards the cost of such appliances.

10. What if, as part of the examination, some other eye injury or disease is identified by the optician?

In these circumstances, where an ophthalmoscopic examination by an optician suggests that you are suffering eye injury or disease, you will be referred to a registered medical practitioner for ophthalmological examination under statutory rules governing the conduct of registered opticians. This examination is available, free of charge, under the National Health Service.

11. I wear bi-focals, will I be able to use a VDU?

Yes, in some circumstances although you may want to arrange the equipment differently from those who do not wear bi-focals. You may even find it more convenient than working with paper because you can place the screen at a suitable reading distance. However, if you find that you are having to sit in an uncomfortable position to see what is on the screen you may need a different pair of spectacles and should consult your optician. If costs are incurred the board will make an allowance of £55.00 towards the purchase of such appliances.

12. Can VDUs cause epilepsy?

No, but some people already suffering from photosensitive epilepsy, an unusual form of the condition, may be susceptible to flickering lights and striped patterns, both of which can sometimes be seen on VDUs. Some sufferers have found that they can work successfully with VDUs without provoking an attack. If attacks are attributable to VDU operation alternative work will be found. In such circumstances there will be no salary detriment.

13. Are there any other health problems connected with working with VDUs?

Many symptoms described by display screen workers reflect stresses arising from their task. They may be secondary to upper limb or visual problems but they are more likely to be caused by poor job design or work organisation, particularly lack of sufficient control of the work by the user, under-utilisation of skills, high-speed repetitive working or social isolation. All these have been linked with stress in display screen work, although clearly they are not unique to it, but attributing individual symptoms to particular aspects of a job or workplace can be difficult. The risks of display screen workers experiencing physical fatigue and stress can be minimised, i.e. by careful design, selection and disposition of display screen equipment, good design of the user's work place, environment and task, and training, consultation and involvement of the user.

14. Sometimes I get pains and discomfort in my upper limbs, what causes this?

A range of conditions of the arm, hand and shoulder areas linked to work activities are now described as work related upper limb disorders. These range from temporary fatigue or soreness in the limb to chronic soft tissue disorders like peritendinitis or carpal tunnel syndrome. Some keyboard operators have suffered occupational cramp.

The contribution to the onset of any disorder of individual risk factors (e.g., keying rates) is not clear. It is likely that a combination of factors are concerned. Prolonged

static posture of the back, neck and head are known to cause musculoskeletal problems. Awkward positioning of the hands and wrist (e.g. as a result of poor working technique or inappropriate work height) are further likely factors. Outbreaks of soft tissue disorders among keyboard workers have often been associated with high workloads combined with tight deadlines. This variety of factors contributing to display screen work risk requires a risk reduction strategy which embraces proper equipment, furniture, training, job design and work planning.

ADJUSTING YOUR WORKPLACE TO SUIT YOU

Many of the difficulties experienced with VDUs have as their source problems with the workplace rather than with the equipment. To avoid such problems it is important that greater care be taken of the layout of a workplace utilising a VDU than is necessary with a non-automated task. The following are general guidelines for the use of VDUs.

The VDU should present a clear and stable image. If it does not report the fault and have the equipment repaired or adjusted.

The work station should have a screen that can be tilted and swivelled to allow you to position it to suit your particular requirements. It will also have a separate keyboard that will allow the user to adjust both the height and angle of tilt. Your chair should have an adjustable back that offers good lumbar support and the seat height should be easily adjustable and, if necessary a foot rest should be used. There is no such thing as an ideal posture but the seating position shown in the diagram will help to reduce the possibility of muscle fatigue. You should also make sure you have enough workspace to hold the documents you need.

When involved in a job that requires significant use of a VDU stress can be reduced by adjusting the equipment to suit your particular needs, using a properly designed chair which is adjustable and gives support and particularly by creating a work pattern that allows you to spend no more than 45 minutes in an hour at the VDU without taking natural breaks to move about, perhaps to file documents or to use the telephone.

When using a VDU it should be positioned to avoid reflection and glare from either daylight or artificial lighting and if required a screen filter can be used to reduce glare and enhance contrast. It is important that VDU screens and filters are kept free from dust and marks so to assist in this proprietary cleaning materials will be provided and it is vital that users follow the instructions on the packaging.

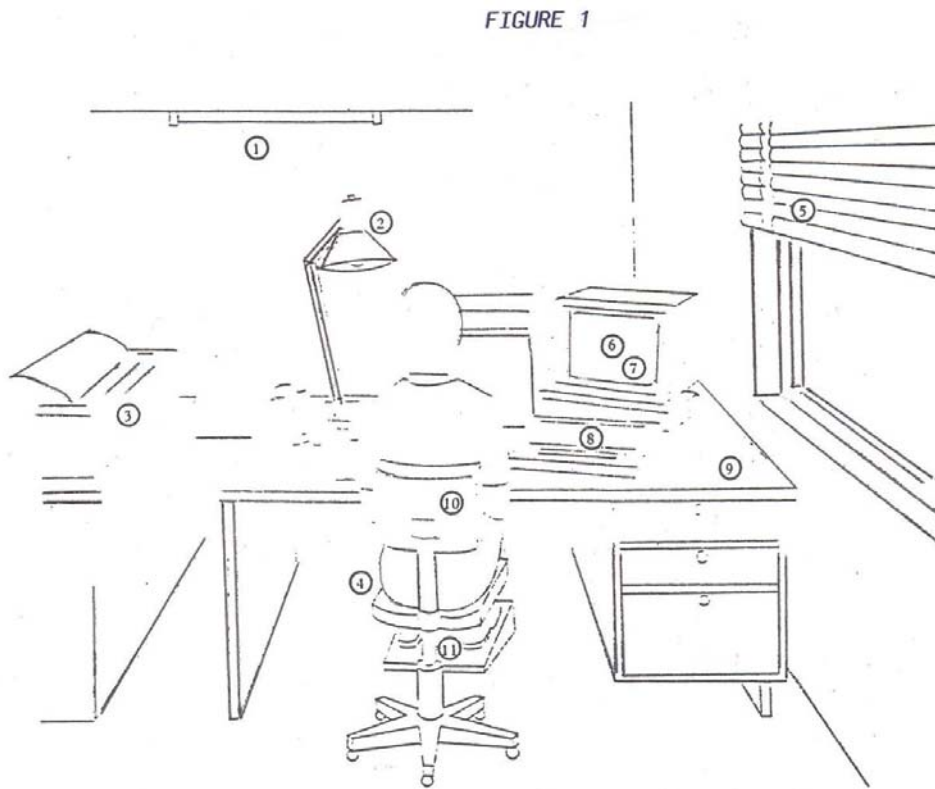
Wrist injuries can arise if a poor keyboard technique is used so do not rest wrists on the edge of the keyboard or desk, or bend your hands at the wrist. Try to keep a soft touch on the keys and don't overstretch your fingers. Some users may find a wrist support helpful.

If you have any problems.....

If you have any problems that you think may be connected with your VDU work, you should contact your Supervisor and/or the Personnel Branch.

If there are problems with the equipment such as excessive noise, glare or generation of static electricity please contact your Computer Development Section who will investigate the cause of the problem and suggest solutions.

FIGURE 1

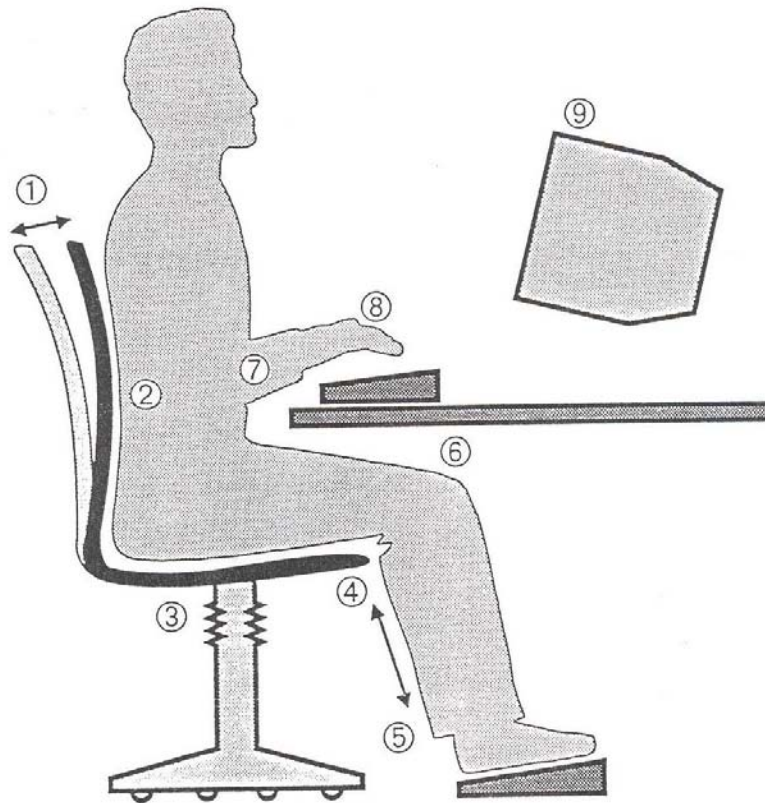


Subjects dealt with in the schedule

1. Adequate lighting
2. Adequate contrast, no glare or distracting reflections
3. Distracting noise minimised
4. Leg room and clearances to allow postural changes
5. Window covering
6. Software: appropriate to task, adapted to user, provides feedback on system status, no undisclosed monitoring
7. Screen: stable image, adjustable, readable, glare/reflection free
8. Keyboard: usable, adjustable, detachable, legible
9. Work surface: allow flexible arrangements, spacious, glare free
10. Work chair: adjustable
11. Footrest

FIGURE 2

SEATING AND POSTURE FOR TYPICAL OFFICE TASKS



- 1 Seat back adjustability
- 2 Good lumbar support
- 3 Seat height adjustability from the seated position
- 4 No pressure on underside of thighs, knees and back
- 5 Foot support for smaller users
- 6 Space to enable and encourage postural change
- 7 Forearms approximately horizontal
- 8 Minimal extension, flexion or deviation of wrists
- 9 Screen height and angle should allow comfortable head position