

Working on computers

When computers for personal use were first available, the screen and keyboard was a single unit, leading to complaints of musculo-skeletal problems from the operators. In the 1970's ergonomic design guidelines led to the separation of the two elements. Now we have come full circle and screens and keyboards are again integrated as one piece; it is important to be aware of how these affect your posture and what you can do to minimise adverse effects.

Poor posture can lead to neck, shoulder and low back problems. Correct desk layout and ensuring a good working position will minimise strain on the neck and back. It is important to take regular breaks and having other equipment such as printers in another part of the office will encourage you to move around through the day.

Try to get into good habits before symptoms start, postural problems build up gradually over a period of time.

Choosing a chair

- Ensure that your chair is stable.
- The chair should be adjustable in height.
- The seat should move independently of the seat back.
- Ideally the seat back should be adjustable in height and tilt to allow good support for the low back.
- If you choose a chair with arm rests, these must not prevent the chair coming close enough to the desk.

Seating position

- Sit right back in the chair and adjust the seat back to support the small of your back.
- If the chair allows, alter the seat to give a gap of 3-5cm between the front of the seat and the back of your knees.
- Your feet should be comfortably flat on the floor, thighs level or sloping down slightly. Your knees should not be higher than your hips.
- Your chair position should allow you to work with your shoulders and arms relaxed, having hands at keyboard/desk height when your forearms are parallel to the floor.

It is important to maintain your correct seating position when working at a desk. Find the correct sitting position and then assess how this relates to your desk. If you need to raise the chair to suit the desk and then cannot put your feet flat on the floor, use a foot rest. If your desk is too low compared with your chair, raise the desk to suit.

Position of computer

- The keyboard and screen should be directly in front of you. Positioning even a small distance from the centre may lead to neck and shoulder problems.
- The screen should be about arms' length in front of you and the top of the screen at approximately eye level.
- Leave a gap between the keyboard and front of the desk for resting the wrists when not typing. Wrist rests can also be helpful.

- If you use the mouse frequently, a mouse-mat with a built-in wrist support can take the strain from the wrist and forearm muscles.
- Using a separate mouse causes the operators shoulder to be rotated. To reduce strain on the joint use the mouse with your opposite hand or choose a keyboard with a central mouse.
- Ensure your screen is kept clean.
- If you do a lot of copy typing, use a document holder for the paperwork.
- If you use a telephone frequently or for long periods consider using a headset.

LAPTOP COMPUTERS

The recommended positions of the screen and keyboard are not possible when using a laptop as when the keyboard is in the optimal position, the screen is not and vice versa.

Apart from occasional use, working on laptops without any adaptation will inevitably lead to bad posture, when you hunch over a computer with your head forward from your shoulders you put a heavy static load through your spine, much greater than when your head is balanced above your shoulders. It is very likely this will lead to neck, upper back, shoulder and arm problems.

It is relatively easy and inexpensive to make changes so you are more comfortable and to reduce postural strain:

- Make sure the computer is on a stable base.
- Raise your computer on a box, some books or a laptop stand, positioned arms length away from you.
- Use a separate keyboard and mouse.
- For occasional use, positioning the computer on your lap may be the least worst option; make sure you are comfortable and can sit well back in the chair, place the laptop for the most neutral wrist position you can and angle the screen so you can see it with the least amount of neck deviation.

When choosing a laptop, think about how you will use it with regards to screen size and weight. If you will be carrying it around a lot, go for the lightest possible and use a bag with straps over both shoulders. There are many types of portable keyboards, even very light ones that roll up!

TABLET COMPUTERS

Tablet computers are light and easy to handle but it is also easy to use them in a position that's bad for your neck and shoulders. It is difficult to avoid this but these tips should help.

- Place the tablet on a table and use a case or stand that puts it at a comfortable viewing angle.
- Change hands, shift your weight and alter your viewing angle frequently.
- Take a break every 15 minutes.

These websites contain useful information:

www.ergonomics.co.uk

www.thebackstore.co.uk

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