

If you have any questions please contact:

University of Cambridge
Occupational Health Service
16 Mill Lane
Cambridge
CB2 1SB

Tel: 01223 336594
Email: OccHealth@admin.cam.ac.uk
[http://www.oh.admin.cam.ac.uk/advice-and-guidance/
laboratory-health](http://www.oh.admin.cam.ac.uk/advice-and-guidance/laboratory-health)

Useful Web Sites

www.hse.gov.uk
www.hse.gov.uk/pharmaceuticals
www.abilitynet.org.uk



Occupational Health

Laboratory Advice

**Ergonomic advice
for microscope use**

OHL06

Introduction

Working with microscopes for long periods can lead to aches and pains in the back, shoulders, neck, arms, wrists, hands or fingers; other symptoms could include pins and needles or numbness. These upper limb disorders (ULDs) are often referred to by the terms repetitive strain injury (RSI), or musculo-skeletal disorders (MSD).

The risk of developing these problems can be prevented or reduced by your posture, the way your work is organised and how the microscope is used.

Posture whilst using the microscope

- Use an adjustable chair with good lumbar back support.
- Sit or stand close to your bench or work surface to avoid overstretching, this requires leg space under the work area.
- Sit supported against the back rest of your chair and adjust the height and footrest for support. If the foot ring does not offer support an alternative footrest may be required.
- Adjust your chair to work height rather than bending your neck down, aim for an upright head position.
- Move the microscope to line up the eyepieces with the table edge.
- Consider eyepiece extensions where possible, or choose a microscope which allows improved head and neck posture.
- Raise and/or incline the microscope on a 30° angle stand to obtain a comfortable upright head position and easier viewing.
- Avoid leaning your forearms on sharp edges, use padding or arm supports.
- Keep upper arms vertical, forearms horizontal and wrists in a straight neutral position.
- Work with your elbows close to your sides.

Organising your work

- Short frequent breaks are more effective than longer infrequent breaks.
- Take a 1-2 minute micro-break after every 15-20 minutes of microscope use, or as often as the procedure allows. Undertake a few simple stretches to relax your back and upper limbs.
- Alternate between different types of work during the day to avoid long periods of microscope work.
- Rotate microscope work with colleagues where possible.

Avoiding eye fatigue

- Keep the equipment clean and in a good state of repair.
- Make sure that the illuminators are in alignment, the light is even and of correct intensity.
- Rest the eyes during frequent short breaks by closing them or looking into the distance.

Other advice

- If you begin to experience any symptoms, please review your posture and work organisation as described.
- Try to take a break from microscope use, or reduce the amount of microscope work for a few days.
- If your symptoms persist contact the Occupational Health Service for further advice and support.