

WORKSTATION ERGONOMIC GUIDELINES

The purpose of these information is to provide practical guidance to minimise the risk of Occupational Overuse Syndrome (OOS)/Repetitive Strain Injury (RSI).

Please note that the following guidelines suit the majority of people, however differences in individuals may require flexibility in the workstation set-up. A review should be conducted after a few days to ensure it meets the needs of the individual and adjustments made accordingly.

All recommendations are based upon Australian Standard AS 3590 - 1990 Screen based workstations, part 2 workstation furniture.

Computer Workstation Dimensions

Workstation ergonomics: ideal set-up

| Height of work surface above floor level | Viewing distance to work |
|---|---|
| If fixed: 680mm to 720mm If adjustable: 580mm to 730mm | 350mm to minimum 750mm to maximum |
| Area of work surface | Height of display |
| Width: 1500mm minimum Depth: 900mm minimum | 30mm to 40mm below eye level |
| Volume of leg space | Seat pan height |
| Width: 800mm minimum Depth: 550mm minimum Height: 580mm minimum | Surface of seat to floor: 380mm to 510mm Seat pan depth: 330mm to 430mm Footrest area: 300mm x 375mm |
| Bench thickness over leg span | |
| 25mm maximum | |

Chairs and Posture Checklist for Keyboard Workers

Well adjusted chairs improve body position and circulation, reduce muscular effort and decrease pressure on the worker's back. Chairs should swivel, have five wheels for stability, breathable fabric on the seat, a rounded front edge and have adjustable height and backrest for lumbar support.

Work surface height

Adjust the height of the work surface and/or the chair so that the work surface is at elbow height or just below, when seated.

Chair

- Adjust the seat tilt so that you are comfortable when you are using the keyboard. Usually this will be close to horizontal but tilted slightly forwards. If this places an uncomfortable strain on the leg muscles or if the feet do not reach the floor then a footrest should be used.
- Adjust the backrest so that it supports the lower back when you are sitting upright.
- Arm rests are not essential. If you do have a chair with armrests and you wish to retain them, then ensure that the chair can come in under the desk.

Keyboard placement

Place the keyboard in a position that allows the forearms to be close to the horizontal and the wrists to be straight. That is, with the hand in line with the forearm. If this causes the elbows to be held far out from the side of the body then re-check the work surface height.

Screen placement

Set the eye to screen distance at the distance that permits you to most easily focus on the screen. Usually this will be within an arm's length. Set the height of the monitor so that the top of the screen is below eye level and the bottom of the screen can be read without a marked inclination of the head. Usually this means that the centre of the screen will need to be near shoulder height.

Desk-top layout

Place all controls and task materials within a comfortable reach of both hands so that there is no unnecessary twisting of any part of the body.

Document holder

Place this close to the monitor screen in the position that causes the least twisting or inclination of the head.

Posture and environment

- Change posture at frequent intervals to minimise fatigue.
- Avoid awkward postures at the extremes of the joint range, especially the wrists.
- take frequent short rest breaks rather than infrequent longer ones.
- Avoid sharp increases in work rate.
- Changes should be gradual enough to ensure that the workload does not result in excessive fatigue.
- After prolonged absences from work the overall duration of periods of keyboard work should be increased gradually if conditions permit.

Glare and reflection

It is important to detect the presence of glare and reflection. To determine whether there is glare from overhead lights the seated worker should hold an object such as a book above the eyes at eyebrow level and establish whether the screen image becomes clearer in the absence of overhead glare. To detect whether there are reflections from the desk surface the worker should hold the book above the surface and assess the change in reflected glare from the screen.

A number of ways are available to eliminate or reduce the influence of these reflections:

- Tilt the screen so that the reflections are directed below eye level.
- Purchase a screen with matt or light diffusing surfaces.
- Cover screen with a light diffusing surface or anti-glare screen.
- Negative contrast screen (dark characters on light background) will reduce the influence of these reflections.

If you experience eye discomfort when using a bright screen you should make the following adjustments:

Turn the screen brightness down to a comfortable level.

- Look away into the distance in order to rest the eyes for a short while every ten minutes or so.
- Change the text and background colours.
- Recommended: black characters on white or yellow background, or yellow on black, white on black, white on blue and green on white. Avoid red and green and yellow on white.

Lighting for Monitors

Place monitors to the side of the light source/s, not directly underneath. Try to site desks between rows of lights. If the lighting is fluorescent strip lighting, the sides of the desks should be parallel with the lights. Try not to put the screen near a window. If it is unavoidable ensure that neither the screen nor the operator faces the window.

If the monitor is well away from windows, there are no other sources of bright light and prolonged desk-work is the norm, use a low level of service light of 300 lux. If there are strongly contrasting light levels, then a moderate level of lighting of 400 - 500 lux may be desirable but high quality anti-glare screens may be necessary.

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Using a mouse

A well designed mouse should not cause undue pressure on the wrist and forearm muscles. A large bulky mouse may keep the wrist continuously bent at an uncomfortable angle. Pressure can be reduced by releasing the mouse at frequent intervals, by selecting a slim-line, low-profile mouse and by using the mouse at a comfortable distance from the body.

Keyboard and telephone operations

Lightweight adjustable headsets with a volume control should be provided for staff on continuous keyboard/telephone operation. For continuous, traffic dependent telephone operations a manual call facility should also be provided.

Use of laptop/notebook computers

Where possible and practical it is advisable that all of the principles outlined above be applied when working with these types of computers. In particular you should try and avoid awkward body postures and ensure that frequent short breaks are taken to minimise the onset of fatigue. Consider using a riser, separate monitor and/or plug in keyboard if using a laptop for long periods to improve your posture.

Training

Training to assist supervisors to correctly set up a workstation for new staff or assist existing staff experiencing musculoskeletal problems is available. See the [HSW Training Plan](#) or contact your [Division/Faculty HSW Manager](#) for further information.

FURTHER INFORMATION

For further information please contact your [Division/Faculty HSW Manager](#) .

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