

WORKPLACE ERGONOMICS

This handout has the aim of preventing workplace injuries and covers:

1. Workstation tips and design
2. Exercises for rest breaks
3. Work station Set Up Checklists

Sit with your bottom right back in the chair so your lower back is supported by the back rest. The lumbar support in the chair should be sitting in the lumbar of your back

When you are sitting at the correct height you need to adjust your monitor so that your eyes naturally fall in the top 3rd of the screen. You may require a monitor raiser to achieve this. Your monitor should be at arm's length

Keep elbows bent to 90 degrees, wrists straight and forearms parallel with the desk

Adjust the height of your seat so that your knees and hips are level, thighs horizontal and feet flat on the floor. A foot rest may be required to achieve this. Ensure there is a space between your knee and the end of the chair

Most people spend more time at work than they do anywhere else. We have a range of support systems available and procedures in place to ensure staff are kept healthy and safe at all times.

***Vary your posture regularly and take a break from sitting every 30 minutes.
Rotate tasks every 2-3 Hours***



Keyboard Use

- * Your keyboard should be placed as close to the front edge of the desk as is comfortable. Documents and wrist and forearm rests should not be placed between the front edge of the desk and the keyboard, as this can cause over reaching
- * Most keyboards can be tilted using small feet at the back. It is generally preferred to keep the keyboard flat and avoid wrist and forearm rests to prevent awkward wrist postures.
- * Adjust the height of the work surface, ie Home row of keys (A-L), in line with your hands and forearms. Elbows should be at 90 degrees and held beside your wrist.
- * Wrists should be held in a neutral or straight position. Prolonged upwards or downwards bending can lead to injury.
- * Add a remote keyboard, mouse and monitor to your laptop, if you use it extensively.

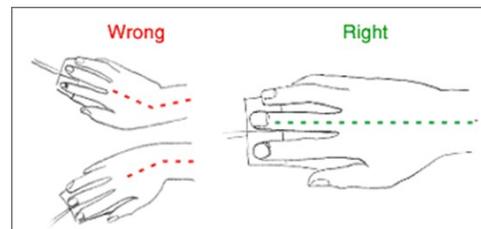
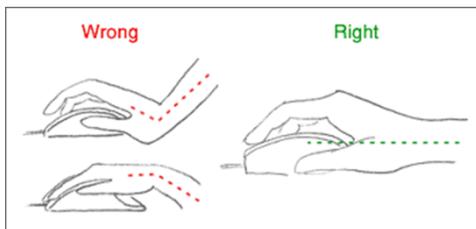
(Source: *A Guide to Health and Safety in the Office, Officewise, June 1996, Comcare Australia*)

Using Your Computer Mouse Safely

Incorrect use and position of your mouse can lead to neck and overuse injuries

MOUSE TIPS

- * Your hand should be in a relaxed position over the mouse.
- * Place your mouse right next to your keyboard.
- * Allow your wrist to glide across the mouse pad surface. Do not just move the wrist joint to move the mouse.
- * Allow your fingers to rest (flop) over the mouse. Do not hold fingers above the buttons ready to strike. Keep your hand off the mouse when not using.
- * Take your hand off the mouse every 5 to 10 minutes and stretch your arms and shake your fingers.
- * Beware of over-reaching. Keep your mouse close



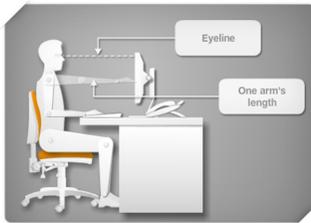
Your Chair

- * Your chair should be set up so that your thighs are horizontal and your feet rest comfortably on the floor.
- * Your work should be at elbow height, so if you are using a keyboard, your hands and wrists should be at the same height as the space bar on your keyboard. Your shoulders should be relaxed and you should not have to strain to reach the keyboard.
- * Your chair height may need to be slightly lower for writing.
- * The backrest should be positioned so that its curve fits into the curve of your lower back. A slight backwards tilt can also help to reduce the amount of force on the lumbar by increasing the angle at the hips
- * Armrests are not generally recommended. Armrests can force you into an uncomfortable static posture



Desk

- * If setting your chair to the correct height does not allow you to position your work at elbow level, you may need to raise or lower the height of the desk
- * Your desk should be roughly belly button height.
- * For a desk that is too high, raising the height of your chair and using a footrest can help you to keep your thighs in the appropriate horizontal position
- * If your desk is too low and cannot be adjusted, please contact a member of the Health & Safety Team
- * If you are using a sit/stand desk determine the standing desk height by relaxing your shoulders and bending your elbows to 90 degrees. Adjust the desk height to just below the forearms – around belly button height. Also remember to alternate between sitting and standing.



Computer Screen

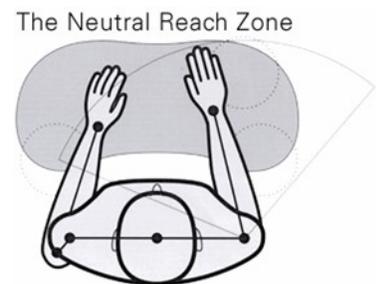
- * You need to make sure your computer screen is set up correctly
- * Having your screen in the wrong position can cause you to hold an awkward posture that could damage your neck muscles and spine
- * Your screen should be directly in front of you, approximately one arm's length from your body, or further if you have a larger screen. The top of the screen should be at eye level or slightly lower
- * Dual screens should be set up side by side with the screens slightly angled towards each other. When shifting focus from one screen to another you should twist your chair rather than your torso

Glare & Eye Strain

- * Glare and reflections on a computer screen can cause eye strain and headaches
- * Your screen should be positioned side on to any windows or strong sources of light
- * If you find it difficult to read from the screen, you may also need to adjust the colour, brightness and contrast of your screen

Workstation Layout

- * Repetitive movement and over reaching can cause injuries while performing manual tasks in the office
- * To manage the way that you are required to move while working at your workstation, you should try to keep frequently used items closer and less frequently used items further away
- * Telephones should be on your non-dominant side to discourage cradling the phone handset between head and hunched shoulder, whilst trying to type / write and talk simultaneously



Laptops

If you are using your laptop for any extended period of time you should:

- * Maintain a neutral neck posture by placing the top of the screen at about eye level or slightly lower if using bifocal glasses. Use a laptop raiser or place your laptop on a raised stable surface such as reams of paper or books so that the screen is at the correct height.
- * Attach an external keyboard and mouse to the laptop.
- * Clean the screen frequently as dust can make it difficult to read and may increase eyestrain.
- * Use a document holder to angle source documents vertically to promote a neutral neck posture.
- * Take frequent stretch breaks every 30 to 45 minutes.

Workstation Set Up Checklist		Yes	No
Chair	Do you have a backrest and seat that is easily adjustable?		
	Is the backrest at waist height supporting the natural hollow of the lower back?		
	Does your chair have a 5 point base with castors?		
	Does your chair have armrests? They should be removed via maximo request unless they have		
	Are the natural curves of the spine maintained?		
Monitor	Is the top of the screen level with your eyes?		
	Is it an arms-length away?		
	Is it directly in front of you (nose and toes in the same direction)		
Desk	Does your desk allow room for your thighs to go underneath?		
	Does it allow for adequate leg room?		
	Are the desk top and drawers arranged to reduce bending and reaching?		
	Are frequently used items in easy reach?		
	Is your phone on your non dominate side?		
Keyboard	Is the keyboard between you and the monitor?		
	Is it at the same height as your forearms?		
	Are you shoulders in a relaxed position when accessing it?		
Mouse	Is the mouse position at the same level and next to your keyboard to arrange over reaching?		
Tasks	Are you work tasks organised so that they are varied?		
	Are stretches displayed and performed ?		
Posture			
Feet	Are both your feet placed flat on the floor or on a footrest?		
Knees	Are you knees at right angles?		
	Is there at least two finger spaces between the seat and the back of your knees?		
Hips	Are your legs sitting square on the seat?		
	Is your buttocks placed well against the back support?		
Shoulders	Are your shoulders in a relaxed position? (not raised when using keyboard and mouse)		
Elbows	Are your elbows position in a straight line with your forearms?		

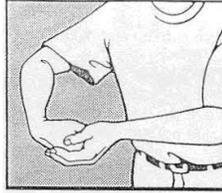
(Adapted from Gassett, Hearne & Keelan, 1996; Hottes, 1997; Occupational Therapy Department, Tamworth Base Hospital; Worksafe Australia, 1989; Worksafe Australia, 1992)

For further information on workstation ergonomics
 complete the online training module in Discover
 or contact The Health & Safety Team on
 4033 9999 (#5) or USafe@newcastle.edu.au

Exercises for Rest Breaks

Tall stretch:

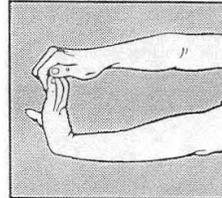
Interlock fingers, palms up. Stretch arms above the head until they are straight. Do not arch the back.



Bend your wrist and fingers with your other hand, bending your elbow slightly at the same time, until you feel the stretch over the back of your forearm. Hold the position for 30 seconds.

Toe-in, toe-out:

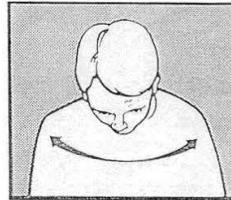
Place feet shoulder-width apart, heels on the floor. Swing toes in, then out.



Stretch your arm out in front of you with your elbow, straight, palm facing away from you (fingers pointing up or down). Then with your other hand pull your fingers backwards until you feel the stretch over the front of your forearm. Hold the position for 30 seconds.

Shoulder roll:

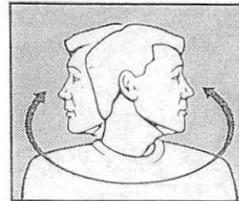
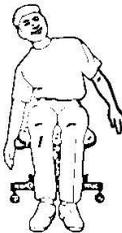
Roll the shoulders -raise them, pull them back, then drop them and relax. Repeat in the opposite direction.



Tuck your chin down onto your chest and gently turn your head from side to side, keeping your chin on your chest. Do this ten times.

Side stretch:

Drop left shoulder, reaching left hand towards the floor. Return to starting position. Repeat on right side.



Turn your head -slowly from side to side ten times.

Back curl:

Grasp shin, lift leg off the floor. Bend forward curling the back, with nose towards the knee. Note: This exercise should be avoided in pre- or post-natal conditions.



FACE AND EYES



Open eyes wide, raise eyebrows, then close eyes as tightly as possible

10-20 times



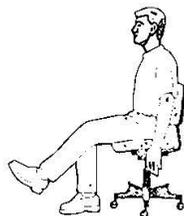
Look straight ahead; roll eyes to one side then the other, then up and down.



5-10

Leg lift:

Sit forward on the chair and place feet on the floor. With a straight leg, lift one foot a few centimetres off the floor. Hold for a second and then return it to the floor. Repeat with the other leg.



Also, remember to regularly divert your eyes from looking at the screen by either staring off into the distance, or focusing eyes on a distant object eg. a tree outside, or a person across the room.