

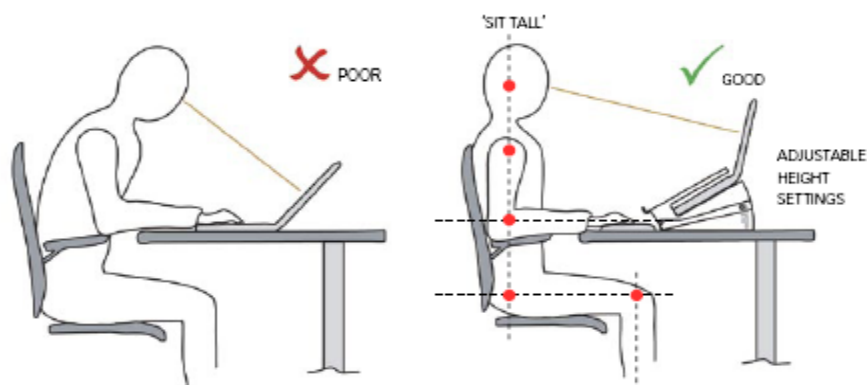
Safe use of Laptops

Laptops were originally designed for short duration and irregular use, not for daily continuous operation. The inherent design features of a laptop encourage their use in non traditional settings and in poor postures. If you need to conduct your work on a laptop for an extended period of time – or your laptop is your primary computer, the following guidance can help reduce the risk of musculoskeletal discomfort or injury.

Basic Principles

All the same principles apply as with regular computer use;

- the desk and laptop should be adjusted so the person can adopt a “neutral” posture – ankles, knees, hips and elbows at about 90° angles and hands in alignment with wrists (see diagram below ✓)
- sit about arm’s length from the screen (depending on individual eye conditions etc)
- keying and holding the mouse should be light and hands and arms rested when not keying
- take regular breaks to rest both your eyes and your muscles – stand and walk to the printer, change posture to perform other task such as reading



Why are laptops not designed for extended use?

Laptop Design Feature	Problems	Associated risks
Screen attached to keyboard	<ul style="list-style-type: none"> • Can be difficult to position laptop well for keying and viewing set up 	<ul style="list-style-type: none"> • Prolonged shrugging of shoulders • Neck bent forward excessively
Smaller size and more closely spaced keys	<ul style="list-style-type: none"> • Constrained hand and finger positioning • More keying errors 	<ul style="list-style-type: none"> • Awkward, static work for the muscles of the hands
Forward position of keys with hand rest area between keys and user	<ul style="list-style-type: none"> • Encourages resting of the hands on the surface while keying or reaching forward to use the keys 	<ul style="list-style-type: none"> • Bent wrist postures • Increased pressure at base of palms and wrist area • Increased tension in upper back and shoulders • Forward reaching of upper limb
Small pointing devices e.g. touch pad, mouse nib or miniature mouse	<ul style="list-style-type: none"> • Requires use of fewer small muscles 	<ul style="list-style-type: none"> • Prolonged, static muscle tension leading to fatigue in muscles of hand and fingers
Smaller screen size	<ul style="list-style-type: none"> • Can be limited resolution 	<ul style="list-style-type: none"> • Eye strain • Awkward upper body positioning while leaning closer to screen

Health & Safety Fact Sheet

Setting up your Laptop

Position

Chose a position where you can achieve the best posture including the ability to;

- adjust the screen position
- sit straight in front of the screen
- keep the laptop away from glare and
- move your arms freely.

External keyboard

This is the most important and easiest solution to poor postures created by the laptop design. The external keyboard allows you to independently adjust the screen and keyboard position and achieve a more appropriate position

External Pointing Devices/Mice

Some people find the internal touchpad or trackball difficult to negotiate. It is preferable to use a full sized mouse – or a mouse that fits your hand size which encourages you to use your whole hand to manoeuvre the mouse and increases comfort for the user.

Document holders

Remember document holders are useful during laptop use as well as at your desk to keep your documents at the same height as your screen. This is also an effective strategy to minimise twisting and poor neck postures when using the laptop.

Laptop stations or stands

These adjustable stands hold the laptop in a more upright position providing good screen height. An external keypad and mouse can then be fitted and the laptop can be used like a regular computer. (see diagram 2)

Other accessories and advances

- Laptop supports – cushions used on your lap to adjust the height of your laptop
- Laptop models with screens that tilt back fully – this allows greater options for improved head and neck posture
- Docking stations – that connect the laptop to regular standard sized keyboards, mouse and monitors
- Detachable screens - allow positioning of the screen anywhere



Diagram 2

Transporting your laptop

The portable nature of your laptop makes it likely that you will carry and handle the laptop and associated accessories more often. Use some simple principles to reduce back, shoulder and neck strain;

- Reduce the weight of the bag by removing any unnecessary items
- Try to pick up and put down the bag with smooth movements, rather than jerky and sudden actions
- If possible, use a backpack design with padded shoulder straps – carry over both shoulders.

Other information

Creating Healthier Workplaces – Manual Handling & Ergonomics

<http://education.qld.gov.au/health/safety/hazards/manual.html>

Office Ergonomics – Setting up your workstation

<http://education.qld.gov.au/health/pdfs/healthsafety/ohs-factsheet.pdf>