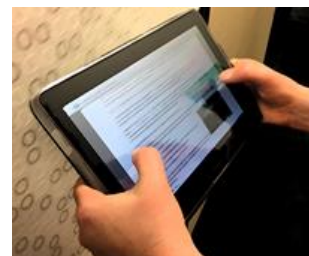


# An ergonomic guide to computer tablet use

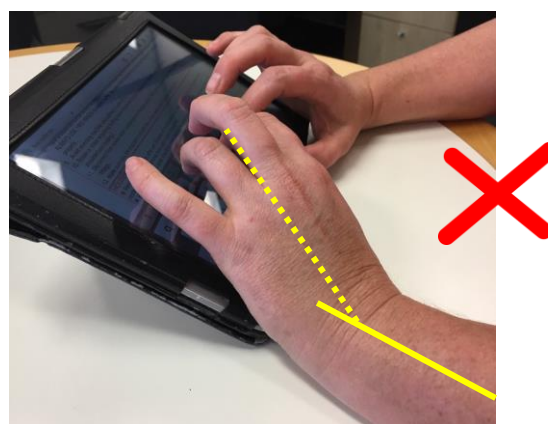
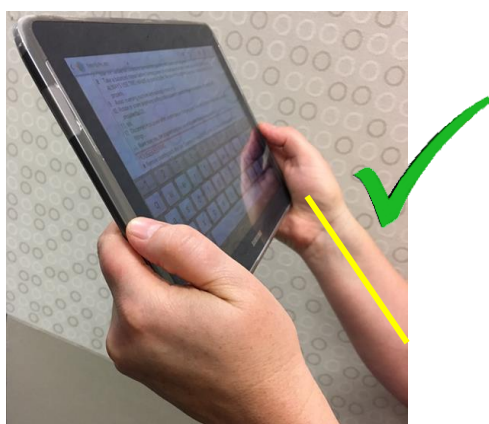
**This guide is intended to help workers manage injury risks associated with the use of computer tablets.**

The use of computer tablets is now a major part of some roles within the department. While these devices allow for data capture 'on the go', their design 'as-is' may not be ergonomically friendly and can compel users to adopt awkward postures, posing the risk of injury.



Awkward postures are ones in which parts of the body move away from their natural or "neutral" position. When working in awkward postures, the muscles work harder to complete tasks. Greater stress is placed on muscles and joints which can lead to an earlier onset of fatigue and an increased likelihood of injury.

Working in neutral postures whenever possible is ideal. This may mean using tablet accessories and aids. It's also important to remember that prolonged static (still or fixed) postures can lead to muscle fatigue. Mixing it up is the key – remember 'the best body posture is the *next* body posture'!



## Safer body postures

The portability of computer tablets allows for a whole range of postures to be adopted for extended periods of time while standing and sitting.

### Standing

While standing, users will often adopt a 'forward neck' posture typically because of the weight of the tablet or to obtain an improved viewing angle. The more your head is bent forward the greater the force on the neck leading to aches and pains to the neck, shoulders and back.

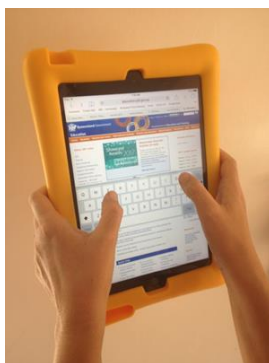
To maintain a neutral neck posture while comfortably holding the tablet:

- aim to position the tablet just below field of vision (just below 30° perpendicular to line of sight)
- maintain a comfortable viewing distance; typically somewhere between 45cm and 70cm.



The following tips encourage neutral postures and change of posture:

- gently bend your upper neck as if nodding your head “yes” and use your eyes (not your head) to look down to avoid excessive neck strain
- tilt the screen towards your line of sight whilst trying to keep your wrists straight
- keep your arms by your sides and aim to keep your elbows in an L-shape with the tablet directly in front of you centrally to your midline
- frequently hold the tablet with two ‘relaxed’ hands to share the load
- try not to pinch it with your thumb and fingers
- while keying, if possible hold the tablet in portrait mode, split the keyboard and move it up to the middle of the screen to improve wrist posture and comfort (as shown below)



- when not holding with two hands, alternate between holding the tablet in your left hand and keying with your right hand fingers and vice versa (switch fingers also)
- use shortcuts where possible to reduce the number of keystrokes
- enlarge text to avoid leaning forwards and eye strain
- use small to medium sized lightweight tablets to improve usability, comfort, biomechanics and to reduce fatigue particularly if frequently held with one hand
- use speech recognition applications that convert to text where possible
- stretch regularly, particularly the wrists, shoulders, neck and upper back
- IF YOU FEEL ANY DISCOMFORT, TAKE A BREAK AND CHANGE YOUR POSTURE.

### Using tablet accessories

Tablet accessories can help users adopt safer postures. However, accessories need to be trialled prior to purchase to ensure they satisfy the requirements of the user and their role. Where possible, **frequently switching between accessories** also assists changes in posture to reduce stress on the muscles, minimise fatigue and help to avoid repetitive use injuries.

**Tablet cases** – aim for:

- lightweight
- made from a material that is non-slip and easy to hold with minimal pressure; and has
- an adjustable stand with several optional viewing angles
- a firm hand/finger strap
- a carry/shoulder strap
- a stylus/digital pen holder.



## Other accessories

- Consider utilising a digital stylus pen or 'pencil' preferably on a tablet that can convert handwriting into type and is compatible to the work required.
- 'Hands-free' designs incorporating neck straps and harnesses are just a few of the more recent portable options. However, these devices should only be considered if neutral neck postures can be maintained. Extra care must also be taken if vision is obstructed (collapse/fold them away prior to moving).

For mobile roles that require limited movement indoors on flat surfaces for extended periods of time, consider:

- a laptop/separate screen and keyboard
- a lightweight, height adjustable portable tablet stand. The stand should ideally be on castors for ease of movement, fold away for easy carriage and storage in a car for example, and be stable to prevent it from toppling over
- lightweight portable telescopic/gooseneck-style table-top stands that will:
  - attach/detach to/from a variety of surfaces
  - extend to a suitable height for viewing/keying in standing
  - also reduce fatigue from excessive periods of holding.

## Sitting

The same principles apply in sitting as they do in standing. Research suggests that lap-level positions should be avoided because they are associated with high head and neck flexion postures.

For recommended sitting postures, refer to the resources on the department's Manual tasks and ergonomics section of the [Creating Healthier Workplaces: Hazards and Risks](#) website.

Head and neck postures can be improved if the tablet is placed on a surface in an elevated position.

- Use a lightweight adjustable stand or tablet rise and position the tablet perpendicular in your normal line of sight on a desk or similar; or
- if an elevated stand is not available, use a raised support such as a case with built-in stand and aim for an angle of about 30° if touchscreen typing.
- Try to maintain neutral wrist postures and avoid arching your body over the tablet.

If word processing for extended periods of time, then:

- use an external keyboard preferably with Bluetooth capability and attempt to simulate a setup for a regular workstation.
- Word processing on a tablet can cause injury risk to the non-tapping fingers as they can become tense trying to avoid accidental screen touches so regularly switch between fingers.
- Opt for a keyboard with greater tactile feedback because users tend to tap 'virtual' keys with greater force putting extra strain on fingers, wrists and forearms.

## Remember:

- there is no single practicable method or device that will completely eliminate the risk of injury so it is important to change your posture frequently
- rest for 5 minutes every half an hour and stretch out your wrists, arms, neck and back
- utilise all the equipment available to you and 'switch it up'
- ease into tablet use and listen to your body for signs of discomfort so you can change something before injury occurs
- for help with purchasing, visit the Purchasing and Procurement Services 'PurchaseIT' web page: [https://intranet.ged.qld.gov.au/Services/Procurement\\_Purchasing/PurchaseIT/Pages/default.aspx](https://intranet.ged.qld.gov.au/Services/Procurement_Purchasing/PurchaseIT/Pages/default.aspx)