

# Workstation Ergonomics

## GUIDELINES

**Approvals:** This document requires the following approvals. Signed approval forms are filed in the Quality directory.

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### // Purpose

These guidelines describe the general principles of office ergonomics and will assist crew leaders and members with the setup of their workstations to minimise the risk of musculoskeletal injuries.

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# 1. Workstation setup

Prolonged work at a computer/ workstation may result in postural discomfort and result in injuries such as neck, arms, hands and back strains. These injuries occur because of a poorly setup workstation and poor posture.

Setting up your workstation correctly is the first step in preventing overuse injuries. Below are the steps that should be taken to ensure safe computer use, arrange work tasks and minimise the risk of injury.

Consideration should be given to:

- accessories required to operate properly
- layout of equipment
- location of furniture.

## 1.1 Steps for workstation setup

### 1.1.1 DESKS

Adjust the height of the desk/work surface and chair so that your elbows are bent at 90°, forearms should be parallel with the floor, wrists straight, and shoulders relaxed.

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. Most people prefer the document holder to be between the keyboard and the monitor. There are many different types of document holders available.

### 1.1.2 CHAIRS AND FOOTRESTS

Adjust the seat tilt so that you are comfortable working on the keyboard. Your knees should be bent at a comfortable angle and greater than 90° flexion. 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.

The footrest height must allow your knees to be bent at 90°; the height of the footrest may need to be adjustable.

Adjust the backrest so that it supports the lower back when you are sitting upright. There are a range of chairs available at Plan2go, check with the Plan2go WHS Officer for options.



### 1.1.3 PHONES

In most cases Plan2go uses Skype with a VOIP system. Where this is not the case, avoid cradling a desk phone between your head and shoulder when answering calls. If you need to use your computer at the same time as a hard phone, use a headset or the phone's hands-free/speaker-phone where possible.

### 1.1.4 KEYBOARDS

The keyboard should be placed in a position that allows the forearms to be close to horizontal and the wrists straight, the hand should be in line with the forearm. If elbows are held far out from the side of the body then re-check the desk/ work surface height.

### 1.1.5 MONITORS

Set the eye-to-screen distance so you can easily focus on the screen. Usually this will be within an arm's length. The height of the monitor should be set so that the top of the screen is below eye level. The bottom of the screen should be read without inclination of the head. Essentially the centre of the screen will need to be near shoulder height.

The height of the monitor can be adjusted using a monitor stand/riser.

People who wear bifocal or multi-focal lenses will need to get a balance between where they see out of their lenses and avoid too much neck flexing.

### 1.1.6 DOCUMENT HOLDERS

Place the document holder close to the monitor screen in the position that causes the least twisting or inclination of the head. Document holders are available for Plan2go crew members.

### 1.1.7 LIGHTING, GLARE AND REFLECTION

#### Lighting

Place the monitor to the side of the light source/s, not directly underneath. Where possible site desks between rows of lights and avoid placing screens near windows. If it is unavoidable ensure that neither the screen nor the operator faces the window.

If the monitor is away from windows, there are no other sources of bright light low level of service light of 300 lux is recommended. If there are strongly contrasting light levels, then a moderate level of lighting of 400-500 lux may be preferable.

#### Glare and reflection

Determine whether there is glare from overhead lights by sitting at your workstation



and holding a book above the eyes (at eyebrow level). The screen image will become clearer in the absence of overhead glare.

Determine if there are reflections from the desk surface by holding the book above the surface and assessing any change in reflected glare on the screen.

You can eliminate or reduce the influence of these reflections in a number of ways:

1. Tilt the screen (top part forwards) so that the reflections are directed below eye level.
2. Cover the screen with a light diffusing surface or anti-glare screen.
3. 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 10 minutes or so.
- Change the text and background colours. We recommend 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.

### 1.1.8 USING A MOUSE

A well-designed ergonomic mouse such as a trackball mouse or a slim-line, low-profile 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. Reduce pressure by releasing the mouse at frequent intervals. Keep the mouse as close as possible to the keyboard, elbow bent and close to the body.

### 1.1.9 LAPTOPS

Laptops were designed to use for short periods of time. If you are using a laptop for long periods it is a good idea to:

- place your laptop on an adjustable stand, so you can view the screen at eye level
- attach an external keyboard and mouse.



## 1.2 Ergonomic equipment

Plan2go has arranged ergonomically-designed equipment. This includes upright mouse, trackball mouse, trackpads, mini keyboards, contoured keyboards, reading stands, footrests, sit-to-stand desks and more.

Discuss requirements with your crew leader and WHS Officer.

### **Sit-to-stand workstations**

Sit-to-stand desks move up and down with the user and can be adjusted for use by multiple people of various heights.

### **Sit-to-stand accessories**

A Varidesk can be placed directly onto a desk without specialist installation and can be easily moved to different desks.

An Ergotron must be installed by a specialist. There are several different styles to suit a range of different desks.

## 1.3 General working conditions

### **1.3.1 KEYBOARD EQUIPMENT AND RADIATION**

Computer screens emit visible light that allows the characters on the screen to be seen. Weak electromagnetic fields and very low levels of other radiation that are not visible to the human eye can be detected by sensitive instruments. Similar emissions are produced by television receivers.

The levels of most radiations and electromagnetic fields emitted from computers are much less than those from natural sources, such as the sun or even the human body, and are well below levels considered to be harmful by responsible expert bodies such as the [International Radiation Protection Association \(IRPA\)](#).

### **1.3.2 POSTURE**

Good posture is essential. Adopt a natural and relaxed position, providing opportunity for movement, from which you can assume a number of alternative positions.

There is no single, rigidly defined position.

### **1.3.3 TYPING**

Typing is a physical activity using a keyboard and requires skill. Unskilled typists are at risk of "occupational overuse injury" because they:



- often use only one or two fingers which may overload the finger tendons
- are constantly looking from keyboard to screen to keyboard, which may strain neck muscles
- often adopt a tense posture (wrists bent back and fingers 'poised to strike').

Plan2go acknowledges the importance of learning correct typing technique. There are numerous online touch typing lessons. We recommend [Learn How To Touch Type \(RATATYPE\)](#).

## 1.4 Rest breaks

Maintaining a fixed posture for long periods of time increases the likelihood of muscular aches and pains. Long periods of repetitive movement and sustained visual attention can also give rise to fatigue-related complaints.

Change your posture at frequent intervals to minimise fatigue and 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.

It is recommended that crew members:

- take regular postural/stretching breaks to reduce intense periods of repetitive movement
- refocus their eyes away from the screen; for example every 20 minutes, focus on an object 20 metres away for 20 seconds
- drink plenty of water to keep well hydrated
- take time away from your desk during your lunch break
- where possible, mix computer related tasks with non-computer related tasks.

Note: crew members returning from an absence of two or more weeks should be provided with a period of adjustment consisting of reduced work rates, or alternative duties when requested.

Tasks should be designed and organised so that:

- computer-related tasks can be interspersed with non-computer related
- computer based tasks can be rotated amongst several staff (task/job sharing).

Crew leaders should ensure that workload controls are exercised using the following strategies:



- planning ahead to avoid peaks and rushed jobs
- delegating fairly to all crew not just the high achievers
- considering the total workload of the individual
- clearly defining each crew members workload
- supporting crew with time management and task prioritisation.

## 2. Workers with disabilities or special needs

If following a workstation assessment it is determined that the reasonable adjustments required are costly, Plan2go has a Reasonable Adjustment Fund. A crew leader can claim for costs of items necessary for the individual. This covers temporary as well as long-term disabilities. The costs are spread between the individual's crew budget and central funds, depending on the cost of the item. Costs of building modifications e.g. ramps, remain the responsibility of the Plan2go Works and Infrastructure program.

## 3. Injuries and incidents

In the event of injury, be sure to notify your crew leader and seek medical advice (e.g. general practitioner).

Be sure to advise your crew leader in the event of a diagnosed injury.

## 4. Related documents

- [Workstation Self-Assessment Checklist](#)
- [Workstation Setup Poster](#)
- [WHS Management System](#)
- [Work from Home Policy](#)
- [WHS Hazard and Incident Reporting Procedure](#)
- [WHS Hazard and Incident Report Form](#)

