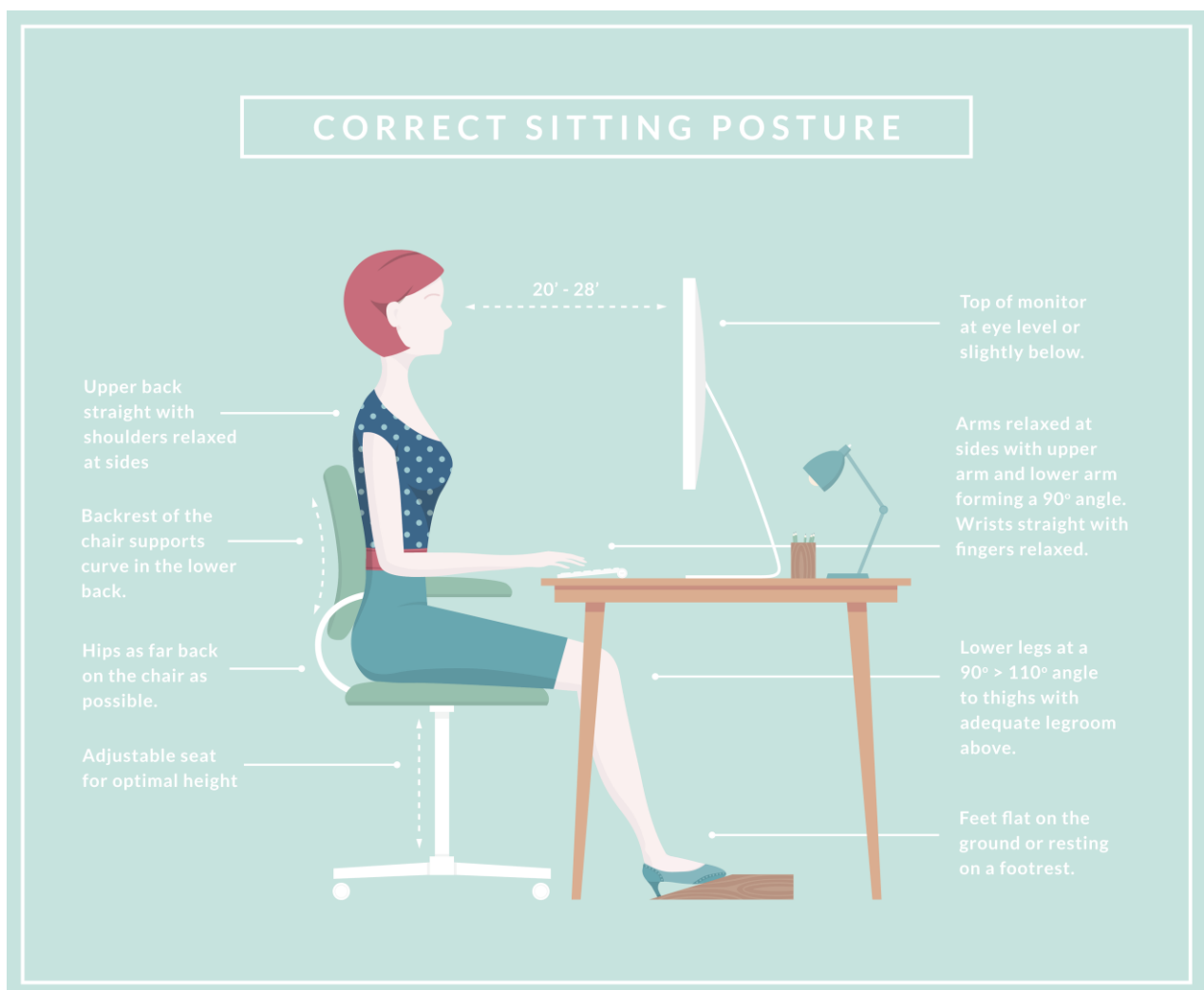**Information Sheet**

Purpose

This information is provided as practical guidance in the setup of a comfortable computer workstation and is intended to be used in conjunction with the Ergonomics Computer Workstation Self-Assessment the Manual Handling and Ergonomics Online Information Session.

Please note that differences in individuals may require flexibility in the workstation set-up and a review should be conducted after any major changes to ensure that they meet the needs of the individual.

General Workstation Characteristics

CORRECT SITTING POSTURE

- 20' - 28'
- Top of monitor at eye level or slightly below.
- Upper back straight with shoulders relaxed at sides
- Arms relaxed at sides with upper arm and lower arm forming a 90° angle. Wrists straight with fingers relaxed.
- Backrest of the chair supports curve in the lower back.
- Hips as far back on the chair as possible.
- Lower legs at a 90° > 110° angle to thighs with adequate legroom above.
- Adjustable seat for optimal height
- Feet flat on the ground or resting on a footrest.

Workstation Dimensions:

The workstation should be large enough to conduct the required work comfortably, without excessive twisting, reaching or awkward upper body postures. Clear leg space should be provided under all desks where operators sit (eg free from desk legs, under desk cupboards etc). Guidance regarding specific workstation dimensions, taking into account tasks performed and desk shape, can be found in ANZ4442:2018 "Office desks, office workstations and tables intended to be used as office desks, Mechanical, dimensional and general requirements and test methods."

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Desktop layout:

Place all equipment and task materials within a comfortable reach of both hands so that there is no unnecessary twisting or over-reaching.

Chairs:

Well-adjusted chairs improve posture and circulation, reduce muscular effort and decrease pressure on the worker's back. Chairs should swivel and have a base with five castors appropriate to the work environment (ie hard, soft, locking, etc). Minimum adjustable features should include seat height, backrest angle and backrest height (where lumbar support is fixed).

The seat should be wide and long enough to provide support for the thighs and buttocks without putting pressure on the back of the knees. Some chairs have seat slides or can be ordered with different seat sizes to suit workers of variable heights and leg lengths.

Adjusting your chair:

- When seated, adjust the height of the work surface and/or the chair so that the work surface is at elbow height or just below. Use a footrest if your feet do not rest on the floor comfortably.
- Adjust the seat tilt (if present) so that you are comfortable when using the keyboard. Usually this will be close to horizontal but tilted slightly downwards at the front.
- Adjust the backrest so that it supports the lower back when sitting upright (this might involve adjusting the height of the entire backrest, or the height of a separate lumbar support).

Armrests are not essential and may restrict access to the desk, leading to forward reaching to use the keyboard and mouse. If you do have a chair with armrests and you wish to retain them, ensure that they do not cause you to hunch or slouch your shoulders and that they do not obstruct your positioning at the desk.

Keyboards:

Place the keyboard in comfortable reach so that the spine and upper limbs are in a neutral, relaxed posture. When in use, the keyboard should be close enough to allow the elbows to remain close to the body, the forearms to be close to the horizontal and the wrists to be straight.

For right-hand dominant users who are experiencing right shoulder discomfort, a keyboard without a numeric keypad may assist in minimising sustained shoulder abduction as it allows the mouse to be used closer to the mid-line.

Mouse use:

The mouse should be a suitable size for the user, noting that people with small hands may experience excessive wrist extension (bending upwards) if the mouse they are using is too large. It should be in comfortable reach and operated with the elbow at approximately 90 degrees. The mouse should be moved using the larger muscles of the arm and shoulder with less reliance on movement through the wrist.

Standard computer mice are generally suitable for most people, however, some users may experience discomfort from prolonged, intensive or repetitive use. The type of mouse used can make a difference, but all users will benefit from strategies to minimise use overall (e.g. task variation, using keyboard short-cuts, and swapping use between dominant and non-dominant hand, where possible).

Alternative mouse designs, (e.g. vertical, trackball, joystick and touchpad) may be recommend in some cases but should be addressed on an individual basis.

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Monitors:

Placement of the monitor for optimal viewing (without causing eye strain or sustained forward posture) is generally one arm's length away, however, there may be minor variations between users.

The height of the monitor should be set so that the top of the screen is just below eye level. If the monitor does not have sufficient height adjustability, a monitor stand or riser may be required.

Use of multiple monitors – Where possible, designate one monitor as your primary screen. This primary screen is the one you use the most, for example to type reports or emails. The primary screen should be centrally aligned with your keyboard, mouse and chair. The other monitor is your secondary monitor and should be used for reference. This monitor should be placed directly beside the primary monitor at the same height. When two monitors are used equally, they should be centrally aligned and adjusted to the same height and distance.

Lighting for monitors – try to place monitors to the side of the light source, not directly underneath.

Glare and reflection – it is important to detect the presence of glare and reflection. To determine whether there is glare from overhead lights, hold an object such as a book above the eyes at eyebrow height 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 to eliminate or reduce the influence of these reflections include:

- Tilting the monitor so that the reflections are directed below eye level
- Purchasing a screen with a matt or light diffusing surface
- Covering the monitor with a light diffusing surface or anti-glare screen

If experiencing eye discomfort when using a bright screen, the following adjustments should be trialled:

- Turning screen brightness down to a comfortable level
- Adjusting text and background colours (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).

Take regular breaks to look away from the monitor and into the distance in order to rest the eyes for a brief period (Consider the 20:20:20 principle: every 20 minutes look 20 metres into the distance for 20 seconds)

Document holder:

Place this between the keyboard and monitor to encourage neutral posture and to assist in keeping the keyboard close to the body.

Telephone:

The telephone is generally placed on your non-dominant side in a position that does not required excessive twisting or over-reaching to pick up the hand-set.

For staff who perform long periods of simultaneous keyboard and telephone operations, consideration should be given to the provision of a headset.

Posture and Environment:

- Vary posture briefly, every 30 minutes when working at a computer workstation for prolonged periods (over one hour). Try changing posture to vary between sitting, standing and walking to minimise fatigue. It's more effective to take frequent short rest breaks rather than infrequent longer ones
- Any adjustments/changes to workstation design should be coupled with regular postural variation.
- Avoid awkward postures at the extreme of joint range, especially the wrists
- Avoid sharp increases in work rates. Ideally, 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

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Height adjustable workstations
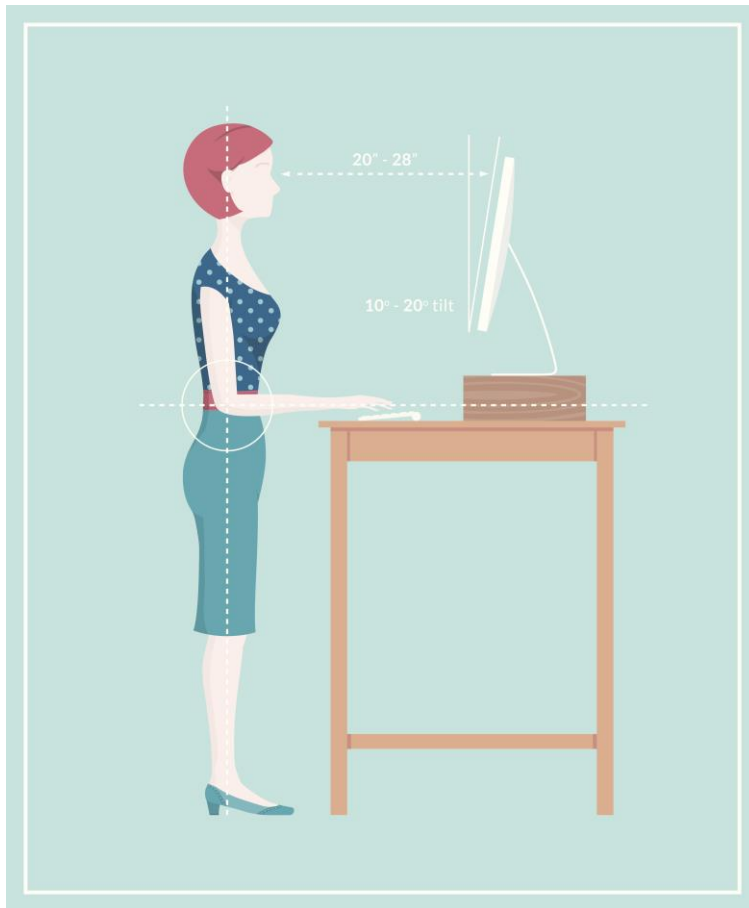
Use of height adjustable workstations can help to encourage postural variation and, in some cases, may be required or encouraged to help in the management of injury or medical conditions. When using a height adjustable workstation, the following should be encouraged:

- Setting standing desk height to allow operation of keyboard and mouse with elbows at ninety degrees and shoulders relaxed
- Use of an anti-fatigue mat to reduce tiredness and leg / back soreness that may be associated with standing more than 2 hours per day.
- Alternating between a sitting and standing posture frequently throughout the day.

Laptops:

Where possible and practical, use the same ergonomic principles and equipment that are comfortable in a traditional desktop computer set-up/office environment. In particular, you should try to avoid awkward body postures and ensure that frequent, short breaks are taken to minimise the onset of fatigue. General tips for using a laptop include:

- Use of an external mouse and keyboard (to facilitate independent adjustment and allow positioning of the laptop monitor at the preferred height)
- Use of a lightweight carrying case with wheels or broad adjustable shoulder strap when transporting laptop
- Avoid resting the laptop on pillows and other soft materials which may obstruct the fan and potentially damage the laptop
- When an external keyboard and mouse are not available select the position (ie height of the laptop) that is most comfortable to maintain but ensure that you take frequent breaks.

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For further information

If you are require further information or assistance please speak with your supervisor or contact your local HSW team

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