Guideline

Workstation Ergonomics

1. Purpose

The purpose of this guideline is to ensure that all workers are, as far as is reasonably practicable, safe from the risks of injury, such as musculoskeletal disorders, resulting from poor ergonomics in the workplace.

This guideline provides general information and should be read in conjunction with other resources in the references section below.

2. Scope

This guideline applies to all DPTI workers.

3. Definitions

TERM	DEFINITIONS
Awkward posture	Where any part of the body is in an uncomfortable or unnatural position, such as: • postures that are unbalanced or asymmetrical; and/or • postures that require extreme joint angles or bending and twisting.
Ergonomics	The study of the relationship between workers and their environment. The aim of ergonomics is to prevent the development of occupational disorders and to reduce the potential fatigue, error, or unsafe acts. This is achieved through the evaluation and design of facilities, the physical environment, jobs, tasks, tools, equipment, processes, and training methods to match the capabilities of the workers.
Lumbar	Relating to the lower part of the back.
Musculoskeletal disorder (MSD)	An injury to, or a disease of, the musculoskeletal system, whether occurring suddenly or over time. It does not include an injury caused by crushing, entrapment, or cutting resulting from the mechanical operation of plant.
Posture	The position of various parts of the body during any activity. Safest posture occurs when a 'neutral' position is maintained by the joints, muscles and soft tissues being used near the middle of the full range of motion.
Repetitive movement	Using the same parts of the body to repeat similar movements over a period of time.
Sedentary behaviour	Behaviours which require little energy expenditure and can include: • sitting or lying down to read or watch television; • sitting while driving a vehicle or travelling; and/or • sitting to study, write or work at a desk or computer.
Worker	Any person who carries out work in any capacity for the department and may include: • employee; • trainee; • volunteer;

TERM	DEFINITIONS
	• outworker; • apprentice; • work experience student; • contractor or sub-contractor; • employee of a contractor or sub-contractor; or • employee of a labour hire company assigned to work for DPTI.
Workplace	Any place where a Worker works and includes any place where such a person goes, or is likely to be, while at work.

4. Guideline detail

4.1. Workstation Ergonomic Self-Assessment Checklist

The Workstation Ergonomic Self-Assessment Checklist is designed to assist workers in making the correct adjustments to the workstation furniture and equipment.

It is recommended that a Workstation Ergonomic Self-Assessment Checklist be completed to:

- ensure workers are supplied with the appropriate tools and equipment for their needs;
- ensure adequate and proper instruction is given to enable workers to use and adjust their furniture and equipment correctly to suit their needs; and
- identify workstation modifications that may be necessary due to existing or acquired medical conditions or complaints.

The Workstation Ergonomic Self-Assessment Checklist can be conducted by workers in conjunction with managers/supervisors as follows:

- on induction;
- when a worker has raised concerns and is experiencing any pain or discomfort as a result of their workstation;
- where accommodation changes result in workers moving to different workstation layouts/designs; or
- after return from an extended leave of absence.

It is recommended that completed workstation ergonomic assessments be retained by managers/supervisors.

4.2. Workstation furniture and equipment

The following guidelines suit the majority of people, however differences in individuals may require flexibility in the workstation set-up. A review should be conducted after a few days to ensure it meets the needs of the individual and adjustments made accordingly. Refer to Appendix 1 for a diagram of the key features of a correct workstation set-up.

4.2.1. Chair

Well-adjusted chairs improve sitting posture, reduce muscular effort and decrease pressure on the worker's back. Chairs should swivel, have five wheels for stability, have adjustable height and have a backrest that provides adequate lumbar support.

The seat height should be adjusted so that the work surface is slightly below elbow height and the seat tilt adjusted so that the hips and thighs are at slightly more than right angles. If the feet do not reach the floor, then a footrest should be used. The backrest should be adjusted so that the lumbar support fits into the curve of the lower back. Arm rests are not essential, however if workers do have a chair with armrests and wish to retain them, the chair should be able to sit under the desk.

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4.2.2. Desk

The height of the work surface and/or the height of the chair should be adjusted so that the work surface allows elbows to be bent to no less than 90 degrees, with forearms parallel to the floor, wrists straight and shoulders relaxed. There should be sufficient space beneath desks to allow free leg movement without obstruction. Loose cables must be stored away from the leg space of the seated user.

Frequently used items should be placed within a comfortable reach of both hands so that there is no unnecessary twisting or reaching of any part of the body. Document holders should be provided for tasks that require frequent reference to hard copy material and should be positioned between the keyboard and the monitor to reduce repetitive head, neck and eye movement.

Sit to stand desks allow workers to alternate between sitting and standing throughout the day. This can contribute to reducing workers' overall sedentary postures during the workday. See the diagram in Appendix 2 for guidelines for the use of sit to stand work stations.

In addition to utilising sit to stand desks, workers should regularly change their posture to minimise fatigue, and take frequent short rest breaks away from their desks, rather than infrequent longer ones.

4.2.2.1 Keyboard

The keyboard should sit flat and directly in front of the worker. It should be placed in a position that allows the forearms to be close to horizontal and the wrists to be straight, to avoid awkward postures at the extremes of the wrist joint range. If this causes the elbows to be held far out from the body, then the height of the work surface should be re-evaluated.

4.2.2.2 Mouse

A well designed mouse should not cause undue pressure on the wrists and forearm muscles. A large bulky mouse may keep the wrist continuously bent at an uncomfortable angle. Pressure can be reduced by releasing the mouse at frequent intervals, by selecting a slim-line, low-profile mouse and by using the mouse at a comfortable distance from the body.

4.2.2.3 Phone

Where tasks involve a high volume of telephone calls, managers/supervisors should provide headsets to avoid awkward postures from cradling the phone between the head and shoulder. Headsets should be lightweight and adjustable with a volume control.

4.2.3. Monitor

4.2.3.1 Height and distance

The height of the monitor should be set so that the top of the screen is at or below eye level and the bottom of the screen can be read without a marked inclination of the head. Workers who wear graduated or progressive lens glasses (multifocal), generally require a lower and tilted monitor position, to avoid tipping their head and neck back to see the screen through the lower part of their glasses. The screen should be set at a distance that permits the worker to easily read and focus on the screen. Usually this will be at an arm's length.

If a single monitor is used, it should be positioned directly in front of the worker. If dual monitors are used equally, the monitors should be positioned so that the inner edges are directly in front of the worker and angled so they are slightly concaved. If dual monitors are used unequally, the primary monitor should be positioned directly in front of the worker and the secondary monitor positioned on an angle directly to the right or left. Refer to Appendix 3 for a diagram of a dual monitor ergonomic set-up.

4.2.3.2 Glare and reflection

Monitors should not be placed directly under light sources. If monitors are positioned near windows, neither the screen nor the worker should face the window. Blinds can be used to control glare from sunlight.

If workers experience eye discomfort when using a bright screen, the following adjustments should be made:

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- 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; and/or
- change the text and background colours. Black characters on white are recommended. Avoid using red and green, and yellow characters on white.

Monitors can cause eye strain and headaches if looked at for too long, or if glare and the colour, font and brightness settings make it difficult to read. To reduce eye strain, workers should regularly refocus their eyes on something in the distance, such as outside a window or at the furthest point in the room.

4.2.3.3 Use of laptop/notebook/tablet computers

Where a laptop/notebook/tablet is the worker's primary computer, it is provided with a docking station which enables it to be used in conjunction with monitors and keyboards. The principles outlined above still apply in this case. Where the laptop/notebook/tablet is being used as a standalone device (i.e. not 'docked'), it is advisable that the principles are still applied where possible. While portable devices are useful when moving between work locations, their prolonged use has ergonomic implications and they should not be used for extended periods of time as a standalone device.

4.3. Corrective Actions

Corrective actions identified by workers as a result of a workstation issues should be addressed by managers/supervisors. If the worker has indicated they suffer significant pain, managers/supervisors should investigate and complete any actions as a priority.

The Workstation Ergonomic Self-Assessment Checklist is for guidance only and further advice should be sought from a registered occupational therapist or physiotherapist if symptoms still persist. External providers can complete the Provider Workstation Ergonomic Assessment Form.

Any recommendations requiring financial approval is the responsibility of the manager and/or supervisor. The Workstation Ergonomic Assessment Factsheet provides further details regarding the use of external providers.

5. Record management

Any records and documentation associated with this procedure must be maintained in accordance with legislative and departmental record keeping processes. Refer to the DP009 Recordkeeping Policy for information regarding records management.

6. Roles and responsibilities

ROLE	RESPONSIBILITIES
Managers and supervisors	Managers and supervisors should: • ensure that a Workstation Ergonomic Self-Assessment is conducted by all office workers as per the conditions outlined in this guideline; • ensure corrective actions identified through the assessment process are promptly addressed, in accordance with the level of risk and completion dates; • provide appropriate and adequate supervision; • ensure appropriate instruction is provided; and • utilise specialist consultants, for example ergonomists, occupational therapists (OT) and physiotherapists, to provide advice and assistance as required.
Workers	Workers should: • take reasonable care for their own health and safety; • complete the Workstation Ergonomics Self-Assessment as per the conditions outlined in this guideline; • participate in any consultative process to develop safe work procedures; • utilise equipment in accordance with procedures;

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ROLE	RESPONSIBILITIES
	• complete mandatory training and information sessions as scheduled; and • take care to avoid adversely affecting their own or others' health and safety at the workplace.

7. Supporting documentation

- Workstation Ergonomic Self-Assessment Checklist
- Provider Workstation Ergonomic Assessment Form
- Workstation Ergonomic Assessment Factsheet

8. References

- *Work Health and Safety Act (SA) 2012*
- Work Health and Safety Regulations (SA) 2012
- Safe Work Australia Hazardous Manual Tasks Code of Practice
- Australian Standards (available through DPTI Library)

9. Appendix

- Appendix 1: Diagram – Key Features of Correct Workstation Set-Up
- Appendix 2: Diagram – Guidelines for Sit to Stand Workstations
- Appendix 3: Diagram – Dual Monitor Ergonomic Set-Up

10. Document Amendment Record

Date	Version	Revision Description
03 January 2019	1.0	Original Version
Document Review Schedule		3 Yearly

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Appendix 1: Diagram – Key Features of Correct Workstation Set-Up

Upper back straight with shoulders relaxed at sides

Adjust backrest of the chair to support the lower back

Hips as far back in the chair as possible

Adjust seat for optimal height

Top of monitor is at eye level or slightly below and distance is approximately one arms length away

Arms are relaxed at sides with upper arm and lower arm forming a 90 - 110 degree angle

Wrists are straight

Lower legs at 90 -110 degree angle to the thighs

Feet flat on the floor or on a footrest

Source: http://in.dpc.sa.gov.au/docs/Documents/Workstation-Ergonomic-Set-Up.pdf

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Appendix 2: Diagram – Guidelines for Sit to Stand Workstations

Start off alternating between sitting and standing every 30-40 minutes, with gradual increases in standing intervals as comfiort dictates

Upper back straight with shoulders relaxed at sides

Support yourself - do not lean on the desk

Chair is moved away from work area to avoid trip hazard

Mobile devices provide a convenient, portable platform for users but are not ergonomically ideal for long term use unless properly set up. Avoid using your mobile device on your lap for long periods of time. Remember to focus on your neck posture.

10° - 20° tilt

Top of monitor is at eye level or slightly below and distance is approximately one arms length away

If prolonged standing is causing significant discomfort, return to sitting

Desk height when standing is 5 to 10 mm below relaxed elbow height

Mobile devices should be closed to avoid excessive looking down to the screen.

Wrists are straight

Seek medical advice if there are pre-existing issues with legs, knees or ankles

Appropriate footwear with minimal heel and well cushioned - shoes must be worn

Feet flat on the floor

Remember to move
Regardless of whether you are sitting or standing or alternating between both you still need to move and change posture on a regular basis

Source: http://in.dpc.sa.gov.au/docs/Documents/Workstation-Standing-Desk-Set-Up-Ergonomic.pdf

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Appendix 3: Diagram – Dual Monitor Ergonomic Set-Up

Dual monitors used equally:

Dual monitors used unequally:

Source: http://in.dpc.sa.gov.au/docs/Documents/Workstation-Dual-Monitor-Ergonomic-Set-Up.pdf

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