## Manual Task Guidelines

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<th>Version</th>
<th>1.2</th>
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<tr>
<td>TRIM file number</td>
<td>08/XXXX</td>
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<tr>
<td>Short description</td>
<td>Guidelines on identifying, assessing and eliminating manual task hazards at Charles Sturt University</td>
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<tr>
<td>Relevant to</td>
<td>All employees</td>
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<td>Approved by</td>
<td>Executive Director, Human Resources</td>
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<td>Responsible officer</td>
<td>Manager, Work Health and Safety</td>
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<td>Responsible office</td>
<td>Division of Human Resources</td>
</tr>
<tr>
<td>Date introduced</td>
<td>23 February, 2006</td>
</tr>
<tr>
<td>Date(s) modified</td>
<td>18 July 2008, Dec 2014</td>
</tr>
<tr>
<td>Next scheduled review date</td>
<td>Dec 2016</td>
</tr>
<tr>
<td>Related University documents</td>
<td>Work Health and Safety Policy</td>
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<td></td>
<td>Occupational Health, Safety and Welfare Objectives and Responsibilities</td>
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<td>Manual Task Procedure</td>
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<tr>
<td>Related legislation</td>
<td>Work Health and Safety Act, 2011 (NSW &amp; ACT)</td>
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<td>Work Health and Safety Regulations, 2011 (NSW &amp; ACT)</td>
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<td></td>
<td>Hazardous Manual Tasks – Code of Practice 2011</td>
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<tr>
<td>Key words</td>
<td>Guidelines, manual tasks, risk identification, risk assessment</td>
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1. **PURPOSE**

This document provides a practical guide to managers, supervisors and those employees who design, manufacture or supply plant, premises, equipment or systems of work to identify, assess and eliminate manual tasks hazards.

2. **DEFINITION**

2.1 A hazardous manual task, as defined in the WHS Regulations, means a task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing involving one or more of the following:

- repetitive or sustained force;
- high or sudden force
- repetitive movement
- sustained or awkward postures; and
- exposure to vibration.

3. **MUSCULOSKELETAL DISORDERS (MSD)**

3.1 A musculoskeletal disorder (MSD), as defined in the WHS Regulations, means 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 (such as fractures and dislocations) or cutting resulting from the mechanical operation of plant.

MSDs may include conditions such as:

- sprains and strains of muscles, ligaments and tendons
- back injuries, including damage to the muscles, tendons, ligaments, spinal discs, nerves, joints and bones
- joint and bone injuries or degeneration, including injuries to the shoulder, elbow, wrist, hip, knee, ankle, hands and feet
- nerve injuries or compression (e.g. carpal tunnel syndrome)
- muscular and vascular disorders as a result of hand-arm vibration
- soft tissue hernias
- chronic pain.

3.2 An MSD may occur suddenly from a single act of over-exertion, for example, straining a back muscle whilst pushing a heavily laden trolley or spraining a shoulder ligament whilst lifting a heavy object. More likely, however, is that an MSD will develop over time from minor strains and the gradual wear and tear of the muscular or skeletal systems. Because these minor strains and gradual wear and tear may not involve pain at the time the manual tasks activity is carried out, there is often the incorrect perception that these activities don’t involve any risk.

3.3 There are a number of factors which, by themselves or in combination, increase the risk of a person developing an MSD. These individual ‘risk factors’ include posture, force exerted, the repetition and speed of movements made, vibration, and the time taken to complete a task. All of
these individual risk factors are in turn influenced by the design and set up of the workplace and individual workstations; the work environment; the characteristics and location of items, and how work is organised and the systems of work in place.

3.4 Whilst some minor MSDs may only take a few days to heal, others can be painful and debilitating, take weeks or months to heal, or even result in permanent disability. MSDs can be prevented and, as such, the University is committed to reducing the incidence and severity of MSDs which arise from manual tasks at the University.

4. RESPONSIBILITIES

4.1 Managers, supervisors and those employees who design, manufacture or supply plant, premises, equipment, or systems of work have a responsibility to eliminate manual tasks hazards or, if that is not practicable, control the risks of harm to the lowest practicable levels.

4.2 In addition, these employees have a responsibility to:

(a) consult with relevant employees;
(b) identify manual task hazards;
(c) assess the risk of injury from manual task hazards;
(d) provide information, instruction and training to employees;
(e) monitor and review the effectiveness of risk controls; and
(f) keep records.

5. RISK MANAGEMENT

5.1 The hazardous manual task risk management process consists of identifying all manual task hazards in the workplace, assessing the risk of those hazards causing a musculoskeletal disorder and then systematically eliminating, or if not practicable, controlling those risks.

5.2 In most cases the risk management process is applied to plant, equipment, materials, premises, systems of work, the work environment and tasks that are already in existence in the workplace. Any risks identified will then require the elimination or modification of the plant, equipment, system of work etc to prevent injury. Ideally, however, manual task hazards should be identified and eliminated before they are able to be introduced into the workplace. To this end, designers and manufacturers of plant, equipment, premises and systems of work have an important role to play in eliminating manual task hazards as early as possible in the design or manufacture phase before they reach the workplace. The risk management process followed in these cases involves the careful consideration of how a person in a workplace might use the item or system of work and an assessment made of the risks that might arise. Issues highlighted in this phase can then be used to ensure a safer design reaches the workplace. Where hazards cannot be fully eliminated in the design or manufacture phases, designers should
provide information and advice on the measures required to control the risks in the workplace. Designers, manufacturers and suppliers have a duty to ensure that all users of the items then receive this information.

5.3 Employees who purchase items for use in the workplace should also attempt to eliminate any manual task hazards before they reach the workplace and include the risk management process in any purchasing specifications.

6. CONSULTATION

6.1 A fundamental element of the Work Health and Safety (WHS) legislation is the requirement to consult with employees when making decisions affecting their health, safety and welfare at work.

6.2 Employees usually have the greatest awareness of any manual task hazards associated with the tasks they perform. Effective consultation with employees is crucial to preventing manual task injuries and needs to be integrated into each of the following stages of the risk management process by involving employees in the identification, assessment and elimination or control of risks.

7. HAZARD IDENTIFICATION

7.1 The first step of the risk management process is to identify manual task hazards in the workplace. This involves identifying all plant, equipment, materials, premises, systems of work, the work environment and individual tasks that have the potential to contribute to a musculoskeletal disorder.

7.2 Manual task hazards may be identified through:

(a) workplace inspections including direct observation of tasks and work areas;

(b) accident/Incident reports;

(c) task analysis;

(d) consultation with employees; and

(e) grievances and WHS complaints received.

7.3 It is important to also undertake this step whenever a change in a work practice is introduced or is planned; when a manual task injury or hazard is reported; when new manual tasks are introduced; or when changes in the work environment are planned or introduced.

7.4 The manual task hazard identification form from the Hazardous Manual Task Code of Practice is available on the Division of Human Resources WHS website to assist in identifying manual task hazards. In using this form you should consider all the jobs that involve manual tasks. Once all the manual task hazards have been identified they will need to be prioritised. If the answer to any of the questions on the checklist is ‘Yes’, there is a risk of injury and a risk assessment will need to be undertaken.
Generally the more ‘Yes’ answers on the hazard identification form, the higher the risk of injury and the higher the priority for risk assessment.

8. RISK ASSESSMENT

8.1 Once a manual task hazard has been identified, the next step is to determine the risk of it causing a musculoskeletal disorder. When assessing the risk, each of the following risk factors must be considered:

(a) **Body posture**
   The risk of injury increases where a person holds the same posture or position over a period of time, or where there is bending, twisting, overreaching or extreme movements of the joints.

(b) **Force**
   The risk of injury increases as the amount of force required to push, pull or hold something becomes greater, where the force is required to be sustained for a period of time, where there are sudden or jerky movements, or when a low but repetitive force is used.

(c) **Repetition of movements**
   The risk of injury increases the more often a movement is repeated.

(d) **Speed of movements**
   The risk of injury increases for tasks that require fast movements to be sustained over a period of time or slow movements sustained over period of time that require a high degree of control, concentration and accuracy.

(e) **Vibration**
   The risk of injury increases with the length of exposure to vibration and the level and amplitude of the vibrations.

(f) **Duration**
   Muscle fatigue occurs when any posture, position or action is required to be held for a length of time. Therefore the risk of injury increases with the length of time a task is performed without a sufficient break to allow the body time to recover.

(g) **Workplace or Workstation layout**
   The poor design or layout of a workstation can increase the risk of injury if it forces workers to adopt poor postures or to twist, bend or overreach to complete tasks.

(h) **Other work environment conditions**
   The work environment can increase the risk of injury, depending on how it influences an individual’s actions. Conditions can include lighting, hot or cold environments and uneven surfaces. For example, a greater force will be required to push and control a trolley across an uneven pathway than a smooth surface.

(i) **Characteristics of objects, equipment, tools, persons or animals**
The characteristic of an item can increase the risk of injury. For example, loads may be heavy, bulky, large or awkwardly shaped, unpredictable (eg moving people or animals), difficult to grasp, have unstable contents or may be hot, cold, sharp, dusty or noxious.

(j) **Location of objects and distances moved**
The risk of injury increases when moving objects that are above shoulder height or below waist height, when items need to be placed very accurately, and with the length of distance the item is to be moved.

(k) **Work organisation and systems of work**
The way work is carried out will determine the posture, force, movements, exposure to vibration and length of time allowed to undertake a manual handling task and hence the likelihood of injury. Employee shortages, unrealistic deadlines and insufficient rest breaks can increase the risk of injury.

8.2 To assist with this process, a risk assessment form from the Hazardous Manual tasks Code of Practice is on the Division of Human Resources WHS website. The form allows you to assess each of these risk factors and identify which of the factors needs to be addressed.

8.3 These factors should then be dealt with in priority order, beginning with any classified as red. Easily resolved risks requiring little or no expenditure should be resolved promptly, regardless of the risk level.

9. **RISK ELIMINATION (and CONTROL)**

9.1 The third and final stage of the manual tasks risk management process is to eliminate those manual task risks identified and assessed above as being capable of causing injury. It is only where elimination is not practicable, that other control measures, applied in accordance with the hierarchy of controls below, should be considered. Where elimination is not possible, the control measures used **must reduce the risk to the lowest practicable level**. Most often the final control options chosen are a combination of the different levels of the hierarchy.

9.2 Start at the top of the hierarchy of controls and work your way down. Each option must be considered and only if it is not practicable in isolation or in combination with another option should you consider options further down the hierarchy. As personal protective equipment (PPE) and training employees in correct manual task techniques do not reduce or eliminate the hazard, they should only be used in conjunction with other control options.
(a) **Elimination**
Eliminate the risk by removing the hazard. For example, does the object need to be moved or can the work be carried out where the object is?

(b) **Substitution**
Substitute lighter or less bulky materials or equipment, ergonomic equipment (eg keyboard, mouse etc) and systems of work.

(c) **Engineering**
Redesign the work environment, work systems, tools or equipment. Use mechanical aids or manual task devices.

(d) **Administration**
Establish appropriate administrative procedures such as policies, guidelines, standard operating procedures etc. Introduce job rotation, rest breaks and routine maintenance programs for all equipment. Provide training to employees, supervisors and managers on risk management and correct manual task techniques.

(e) **Personal Protective Equipment (PPE)**
Provide correctly fitted and properly maintained PPE and training in its use.

10. **EXAMPLES OF RISK CONTROL**

10.1 Where elimination is not possible, the most common control measures for reducing the risk to its lowest practicable level are a combination of:

(a) redesigning the task, work environment or workplace;

(b) provision of manual task equipment; and
(c) training employees in correct manual task techniques specific to the tasks they undertake and in any standard operating procedures for these tasks.

10.2 When determining how to redesign the task, work environment or workplace, review the risk assessment and look at each of the factors that were rated as either yellow or red and determine if these can be altered.

For example:

(a) Can unstable or uneven floor surfaces be fixed?
(b) Can the layout of plant, equipment and furniture be altered to prevent twisting, bending and overreaching?
(c) Can the set up of the individual workstation be altered?
(d) Can the work height be adjusted, by changing the height of the table or chair?
(e) Can the materials or work flow be rearranged?
(f) Can heavy or frequently used items be stored at waist height?
(g) Can the item being handled be repackaged into smaller weights, or the shape of the item altered?
(h) Can handles be attached to the item?
(i) Can lighter tools or tools that keep joints in a neutral position be purchased?
(j) Can job rotation be introduced and adequate rest breaks scheduled?
(k) Can you shorten the distance something has to be carried?

10.3 Determine if there is any manual task equipment that will reduce the risk of injury. Examples include trolleys, pallet jacks, scissor lifts, hoists and conveyors.

10.4 Employees need information to understand manual task hazards, the associated risk of musculoskeletal disorders and any control measures as they relate to their work environment to be able to recognise and take action to avoid work practices or activities likely to lead to injury.

10.5 Studies have shown that employees provided with generic safe lifting training, typically including being shown a two-handed lift, from the floor of a box generally do not transfer these techniques to tasks back in the workplace where these tasks involve different conditions than those shown in the training session. As manual tasks also involves far more than simply lifting, for training to be effective it needs to encompass all manual task activities and be specific to the workplace.
10.6 Please contact the WHS Unit to discuss your training requirements.

11. RESOLUTION OF PROBLEMS

11.1 There may be occasions where the elimination or control of a hazard may be outside of your immediate control. For example, where elimination of the hazard may require a change to the premises, installation or repair of external thoroughfares or where the control of a process belongs with another School or Division of the University. Where this occurs, consultation should be undertaken with the other party to attempt to resolve the issue. There will also be occasions when there is a time lapse between when a hazard is identified and when controls can be put in place, which again may be out of your control. In these circumstances it is important in the meantime to find short term / temporary solutions to reduce the immediate risk of injury as much as possible until the longer term solution can be implemented. In both these cases it is important that the elimination or control of the hazard does not become stalled and no action is taken.

11.2 Where employees feel that unit managers do not resolve a manual tasks issue within a reasonable period of time or where unit managers are unable to resolve an issue out of their immediate control, the University’s existing formal consultation mechanisms should be utilised. Either party can request their Health and Safety Representative (HSR) to seek remediation on their behalf.

12. EXPERT ADVICE

There may be some occasions where you may wish to seek professional or expert assistance with hazard identification, risk assessment or risk controls. Occupational Therapists or Ergonomic Consultants can assist with the risk management process and can conduct an ergonomic or manual task assessment of your area and provide manual task training specifically tailored to your area. Any cost involved would need to be met by the unit. For further information contact the WHS Unit for contacts in your local area.

13. EVALUATION

After control measures are put in place it is important to evaluate whether the controls are effective, have reduced the risk to the lowest possible level and have not introduced any new hazards into the workplace. Changes should be made where necessary.

14. RECORD KEEPING

14.1 Managers and supervisors are required to retain records of any hazard identification, risk assessments and risk control measures undertaken until the hazard, or the hazard as modified or reassessed, no longer exists.

14.2 Training records should also be kept, identifying the description of any training session, the date and location of the session, details of the training provider and details of the participants.
15. FURTHER INFORMATION

Further information and forms can be found on the CSU Manual Tasks Website, located at: http://www.csu.edu.au/division/hr/health-safety-wellbeing/risk-management

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<tr>
<th>Version number</th>
<th>Date</th>
<th>Short description of amendment</th>
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<tr>
<td>1.1</td>
<td>18/07/08</td>
<td>Change title and all reference from manual handling to manual tasks as per new ASCC National Standard and COP on Manual Tasks (2007)</td>
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<tr>
<td>1.2</td>
<td>Dec 2014</td>
<td>Change to logo, current legislative references including Hazardous Manual Tasks - Code of Practice 2011</td>
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