



**NATIONAL CODE OF PRACTICE
FOR THE PREVENTION OF
OCCUPATIONAL OVERUSE SYNDROME
[NOHSC:2013(1994)]**

JUNE 1994

The National Occupational Health and Safety Commission has declared the *National Code of Practice for the Prevention of Occupational Overuse Syndrome*.

National codes of practice declared by the National Commission under s.38 (1) of the *National Occupational Health and Safety Commission Act 1985* (Cwlth) are documents prepared for the purpose of advising employers and workers of acceptable preventive action for averting occupational deaths, injuries and diseases in relation to workplace hazards.

The expectation of the Commonwealth Government and the National Commission is that national codes of practice will be suitable for adoption by Commonwealth, State and Territory governments. Such action will increase uniformity in the regulation of occupational health and safety throughout Australia and contribute to the enhanced efficiency of the Australian economy.

It should be noted that National Commission documents are instruments of an advisory character, except where a law, other than the National Occupational Health and safety Commission Act, or an instrument made under such a law, makes them mandatory. The application of any National Commission document in any particular State or Territory is the prerogative of that State or Territory.

National Occupational Health and Safety Commission

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FOR THE PREVENTION OF
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[NOHSC:2013(1994)]**

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The National Commission would also like to acknowledge the Victorian Occupational Health and Safety Commission for making available their *Code of Practice for Manual Handling (Occupational Overuse Syndrome)*, 1992.

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FOREWORD

The National Occupational Health and Safety Commission is a tripartite body established by the Commonwealth Government to develop, facilitate and implement a national occupational health and safety strategy.

This strategy includes standards development, the development of hazard-specific and industry-based preventive strategies, research, training, information collection and dissemination and the development of common approaches to occupational health and safety legislation.

The National Commission comprises representatives of the peak employee and employer bodies - the Australian Council of Trade Unions and the Australian Chamber of Commerce and Industry - as well as the Commonwealth, State and Territory governments.

Consistent with the National Commission's philosophy of consultation, tripartite standing committees have been established to deal with issues relating to standards development, research and the mining industry. Expert groups and reference groups may be established to provide advice to the standing committees on those issues with which the National Commission is concerned.

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PREFACE

This national code of practice replaces the *National Code of Practice for the Prevention and Management of Occupational Overuse Syndrome* [NOHSC:2001(1990)].

This document, the *National Code of Practice for the Prevention of Occupational Overuse Syndrome* [NOHSC:2013(1994)] should be used in conjunction with the assessment and control strategies addressed in the *National Code of Practice for Manual Handling* [NOHSC:2005(1990)]¹.

Other documents that should be read in reference to this document are the National Commission's:

- (a) *National Standard for Manual Handling* [NOHSC: 1001(1990)]²; and
- (b) *Guidance Note for Manual Handling in the Retail Industry* [NOHSC:3014(1992)]³;
- (c) *Guidance Note for the Prevention of Occupational Overuse Syndrome in Keyboard Employment* [NOHSC:3005(1989)]⁴; and
- (d) *Guidance Note for the Prevention of Occupational Overuse Syndrome in the Manufacturing Industry* [NOHSC:3015(1992)]⁵.

The purpose of this national code of practice is to provide practical guidance for the prevention of risks, and the identification, assessment and control of risks, arising from tasks undertaken in the workplace which involve:

- (a) repetitive or forceful movement or both; and/or
- (b) maintenance of constrained or awkward postures.

This national code of practice is consistent with, and complementary to, the *National Code of Practice for Manual Handling* [NOHSC:2005(1990)]¹.

The information in this national code of practice provides advice to employers and employees on meeting the requirements for the *National Standard for Manual Handling* [NOHSC:1001(1990)]². Both this national code of practice and the *National Standard for Manual Handling* [NOHSC:1001(1990)]² should be consulted and applied to work involving:

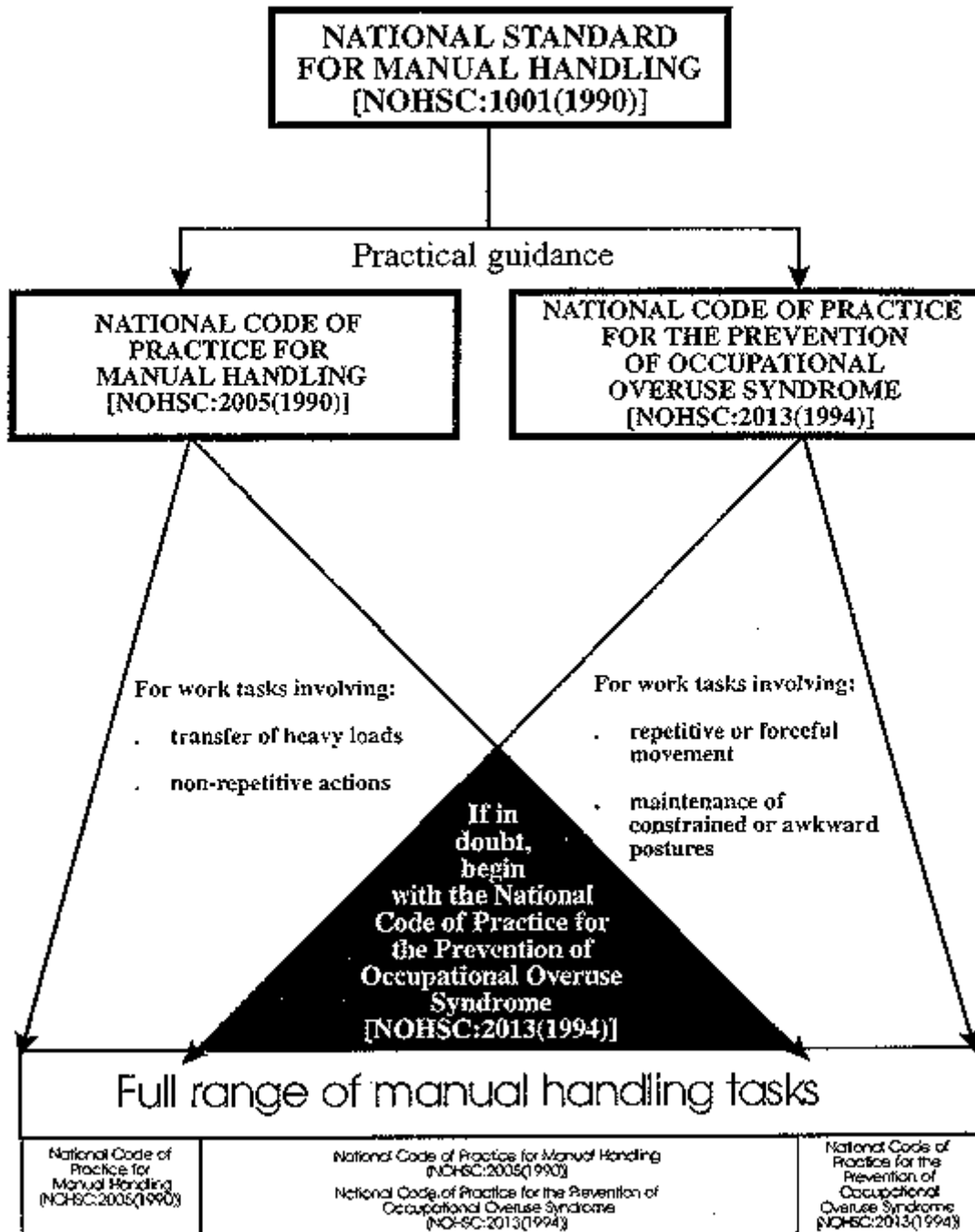
- (a) repetitive or forceful movement or both; and/or
- (b) maintenance of constrained or awkward postures.

See Figure 1 on the following page for further guidance.

In keeping with the *National Code of Practice for Manual Handling* [NOHSC:2005(1990)]¹, this national code of practice considers the multiple factors involved in risk identification, assessment and control to be applied to manual handling tasks.

The National Commission, having considered public comment on the draft document, now declares a final *National Code of Practice for the Prevention of Occupational Overuse Syndrome* [NOHSC:2013(1994)] under s38 (1) of the *National Occupational Health and Safety Commission Act 1985* (Cwlth).

Figure 1 Which National Code of Practice to Use



1. PURPOSE AND SCOPE

1.1 This national code of practice may be cited as the *National Code of Practice for the Prevention of Occupational Overuse Syndrome* [NOHSC:2013(1994)].

1.2 The purpose of this national code of practice is to provide practical guidance in meeting the requirements of the *National Standard for Manual Handling* [NOHSC:1001(1990)]² with respect to the prevention of risks, and the identification, assessment and control of risks, arising from tasks undertaken in the workplace which involve:

- (a) repetitive or forceful movement or both; and/or
- (b) maintenance of constrained or awkward postures.

1.3 All workplaces may have tasks that involve the above activities, and therefore the risks of occupational overuse syndrome and other injuries that can arise must be considered.

1.4 This document has been designed to be used in the consultative process in the workplace.

2. INTERPRETATION

2.1 This national code of practice applies to all workplaces. Its scope includes all work processes in occupations which have tasks involving:

- (a) repetitive or forceful movement or both; and/or
- (b) maintenance of constrained or awkward postures.

3. OVERVIEW

3.1 This national code of practice provides advice on the following areas:

- (a) General Principles (Chapter 5);
- (b) Risk Identification (Chapter 6);
- (c) Risk Assessment (Chapter 7); and
- (d) Risk Control (Chapter 8).

4. DEFINITIONS

4.1 In this national code of practice:

'Awkward' means where the posture or action required for the task creates some discomfort or is difficult to maintain.

'Constrained' means where the posture is forced, cramped, restrained, unnatural, confined or restricted.

'Consultation' means the sharing of information and exchange of views between employers, employees and employee representatives. It includes the opportunity to contribute to decision making in resolving manual handling risks.

'Control strategies' means measures taken to eliminate or reduce the risk of injury.

'Employee' means an individual who works under a contract of employment, apprenticeship or traineeship.

'Employee representative' includes an employee member of a health and safety committee where established in the workplace, or a person elected to represent a group of employees on health and safety matters.

'Employer' means a corporation or an individual who employs persons under a contract of employment, apprenticeship or traineeship.

Note: The definition of employer includes the self-employed which means a person who works for gain, other than under a contract of employment, apprenticeship or traineeship, whether or not that person employs others.

'Fixed' means set; not changing, not fluctuating, or non-varying.

'Force' means any action that tends to maintain the position of an animate or inanimate object, to alter the position of an animate or inanimate object, or to distort it.

'Hazard' means the potential to cause harm or injury.

'Manual handling' means any activity where a person is required to exert force to lift, lower, push, pull, carry or otherwise move, hold or restrain any animate or inanimate object.

'Occupational overuse syndrome (OOS)', also known as repetition strain injury (RSI), is a collective term for a range of conditions characterised by discomfort or persistent pain in muscles, tendons and other soft tissues, with or without physical manifestations. It is usually associated with tasks which involve:

- (a) repetitive or forceful movement or both; and/or
- (b) maintenance of constrained or awkward postures.

'Optimum/Optimal' means best or most favourable.

'Pacing' means a system of work where the speed of the work required to be performed by the employee is determined by external factors such as the speed of a machine or an electronic device over which the employee has no control.

'Repetition' means repeated action.

'Risk' means the likelihood of harm or injury actually occurring.

'Risk factor' means a factor that contributes to an increased risk of injury.

'Syndrome' means a collection of symptoms.

'Risk' means the likelihood of harm or injury actually occurring.

'Risk factor' means a factor that contributes to an increased risk of injury.

'Syndrome' means a collection of symptoms.

'Task' is a group of related job parts done as a unit of work.

'Weight' means the mass of an object (expressed in kilograms).

'Workable' encompasses the meaning of 'practicable' in Victoria, Queensland, Western Australia and the Northern Territory, 'reasonably practicable' in New South Wales, South Australia, the Australian Capital Territory and Commonwealth jurisdiction and 'a reasonable precaution' in Tasmania.

Workable having regard to:

- (a) the severity of the hazard or risk in question;
- (b) the state of knowledge about that hazard or risk and any ways of removing or mitigating that hazard or risk;
- (c) the availability and suitability of ways of removing or mitigating that hazard or risk; and
- (d) the cost of removing or mitigating that hazard or risk.

'Workplace' means any place, including any aircraft, ship or vehicle, where a person works, or is likely to work, and includes any place where a person goes while at work.

'Workstation' means the place from which the employee works, including equipment, furniture and fittings.

5. GENERAL PRINCIPLES

CONSULTATION

5.1 The *National Standard for Manual Handling* [NOHSC:1001(1990)]² (see Chapters 4 and 5 of the national standard) requires risk identification, assessment and control of manual handling tasks to be carried out by employers in consultation with employees who are required to carry out such tasks and employee representative(s). This consultation should occur:

- (a) during the design and implementation/purchase of new workplace layout, furniture, work processes and equipment (see sections 2.8-2.12 of the *National Code of Practice for Manual Handling* [NOHSC:2005(1990)]¹ for more information);
- (b) when the employer is identifying the areas of risk to establish priorities for assessment;
- (c) during the risk assessment process;
- (d) when determining which risk control strategies (including training) should be applied to prevent or reduce the risk of injuries resulting from tasks involving:
 - (i) repetitive or forceful movement or both, and/or
 - (ii) maintenance of constrained or awkward postures; and
- (e) when reviewing the effectiveness of implemented control measures.

5.2 Consultation may occur through formal and/or informal processes, and involve direct and/or representational participation.

RISK FACTORS

5.3 Some of the known risk factors associated with occupational overuse syndrome are:

- (a) awkward body postures;
- (b) poorly designed workstations, equipment, machinery and tools not matched to the employee, including the effects of vibration and sudden impact forces;
- (c) poorly designed tasks, that is, factors such as employee position, forces required and the design and placement of equipment;
- (d) work organisation factors which may contribute to demands placed on employees, such as required output, duration and variation of tasks, number and duration of pauses and the urgency of deadlines;
- (e) inappropriate/poor arrangement of job design, for example, the requirement to perform the same repetitive movements; and
- (f) new employees, or those returning to work after an extended absence, being required to perform repetitive movements without a period for adjustment.

5.4 Other important factors are the control employees have over the performance of their tasks and in their level of job satisfaction and involvement.

RISK IDENTIFICATION, RISK ASSESSMENT AND RISK CONTROL

5.5 This national code of practice provides guidance on the following three key stages in the process of reducing injuries arising from tasks undertaken in the workplace which involve:

- repetitive or forceful movement or both; and/or
- maintenance of constrained or awkward postures.

Figure 2 The Three Stage Approach to Injury Reduction

FIRST STAGE

Risk Identification

- **Analysis of Workplace Injury and Incident Records**
- **Consultation with Employees**
- **Direct Observation**

The first stage is to identify manual handling tasks which are likely to be a risk to health and safety.

SECOND STAGE

Risk Assessment

- **Workplace and Workstation Layout**
- **Working Posture**
- **Duration and Frequency of Activity**
- **Force Applied**
- **Work Organisation**
- **Skills and Experience**
- **Individual Factors**

The second stage is to conduct assessment of particular risk factors.

THIRD STAGE

Risk Control

- **Job Design and Redesign**
- **Modify Workplace Layout**
- **Modify Object or Equipment**
- **Maintenance**
- **Task-specific (Particular) Training**

The third stage is to consider and implement control measures to eliminate or reduce risks.

TRAINING

5.6 Where manual handling has been assessed as a risk, employers should ensure that employees involved in such tasks or jobs receive appropriate training in safe work practices and procedures.

5.7 In addition to general training, task-specific (particular) training should be provided to employees. Task-specific (particular) training differs from general training in that it is specific to the task, work process or job. It aims to provide employees with the relevant knowledge and skills to enable them to perform the task in a safe and healthy manner.

Target Groups

5.8 In addition to the employees involved in manual handling, other target groups requiring training are:

- (a) supervisors and managers of employees involved in manual handling tasks;
- (b) employee representatives; and
- (c) employees responsible for the selection and maintenance of plant and equipment, and job and task design and organisation.

Training Objectives

5.9 Training objectives should generally include:

- (a) the prevention and control of manual handling injuries, in particular, those injuries arising from work practices involving repetitive or forceful movement or both, and/or maintenance of constrained or awkward postures;
- (b) the effective implementation of risk identification, assessment and control approaches; and
- (c) the promotion and utilisation of safe work procedures, practices and techniques established for the prevention and control of occupational overuse injuries.

Structure and Content

5.10 The structure and content of any manual handling training program should be tailored to meet the specific needs and learning requirements of the target group, including the specific needs of employees of non-English speaking backgrounds.

Review and Evaluation

5.11 The employer, in conjunction with employees and employee representatives, should regularly review training to ensure training objectives are met.

5.12 Training should also be reviewed when there is:

- (a) change in work practices including manual handling control measures;
- (b) change in workplace layouts, task design or organisation; and
- (c) introduction of new or modified plant or equipment.

5.13 Training provided should be commensurate with the associated risks as identified in the assessment process. Training should be provided for all new

employees as part of job induction.

5.14 Refresher training should be provided on a regular basis for employees:

- (a) involved in assessed manual handling tasks to ensure maintenance of safe work practices; and
- (b) returning to the job following extended absence.

Task-specific (Particular) Training

5.15 Task-specific (particular) training should be provided to employees wherever implementation of the control measures indicates the need. It should be provided by persons skilled and knowledgeable in the specific tasks and job, and in the general approach to manual handling risk control.

5.16 Task-specific (particular) training should also be provided in conjunction with the introduction of mechanical aids and equipment changes.

5.17 The training should be specific to the task and aim to ensure that the employee:

- (a) understands the reasons for doing the task with the least risk to health and safety;
- (b) can recognise the health and safety risk within a task and decide on the most appropriate safe work practice; and
- (c) can perform and maintain the specified safe work practices and procedures.

5.18 Task-specific (particular) training should be supplemented by appropriate supervision and monitoring of the specified safe work practices and procedures, as required.

EMPLOYEE DUTIES

5.19 Employees have a duty to cooperate with their employer and supervisors in accordance with Chapter 6 of the National Standard for Manual Handling [NOHSC:1001(1990)]². Employees should also assist employers in their efforts to identify, assess and control risks arising from repetitive or forceful movement or both, and/or maintenance of constrained or awkward postures.

5.20 Employees should, where workable:

- (a) participate in, and use, the training provided in safe work systems, procedures and practices;
- (b) participate in, and use, the particular training provided in specific tasks, skills and techniques;
- (c) use the mechanical aids or devices and the associated training provided;
- (d) take any rest breaks provided;
- (e) cooperate with their employer in completing the Risk Identification Checklist (see Appendix 2), Risk Assessment Form (see Appendix 3) and Risk Control Form and Plan (see Appendix 4) contained in this national code of practice; and
- (f) report to their employer or employee representative any problems observed or experienced with tasks involving repetitive or forceful movement or both,

and/or maintenance of constrained or awkward postures.

REVIEW AND EVALUATION

5.21 The implementation of this risk control approach, as with any successful systematic process, does not end with the implementation of some change. The effectiveness of the new control measures needs to be reviewed regularly to ensure that the objectives are being achieved and that there are no unforeseen negative outcomes.

RECORD KEEPING

5.22 Records associated with the implementation of the National Standard for Manual Handling [NOHSC:1001(1990)]² should be maintained in a central location and be available to employee representatives. Such records will make the tasks of risk identification, and review and evaluation easier.

5.23 The records may include information on:

- (a) the prevention program in place to reduce the risk of injury arising from work involving repetitive or forceful movement or both, and/or maintenance of constrained or awkward postures;
- (b) risk identification and assessment;
- (c) design modifications to equipment and work processes;
- (d) risk control measures implemented;
- (e) training and education activities; and
- (f) review and evaluation.

6. RISK IDENTIFICATION

Figure 3 Risk Identification

FIRST STAGE

Risk Identification

- Analysis of Workplace Injury and Incident Records
- Consultation with Employees
- Direct Observation

SECOND STAGE

THIRD STAGE

6.1 The first stage in the three-stage approach to safe manual handling is to identify and place in order of priority tasks which are likely to involve repetitive or forceful movement or both, and/or maintenance of constrained or awkward postures.

6.2 Risk identification is carried out by:

- (a) analysing the injury and incident records of the workplace;
- (b) consulting with the employees doing the task and employee representatives; and
- (c) direct observation or inspection of the task or workplace.

6.3 If any of these three steps indicate the need for further action, Chapter 7 of this national code of practice provides practical guidance or risk assessment.

ANALYSIS OF WORKPLACE INJURY AND INCIDENT RECORDS

6.4 Injury and incident records should be used to identify hazards.

6.5 Records of injuries should be examined to identify where and in what jobs manual handling-related injuries have occurred.

6.6 It is often useful to examine injury records to find out the frequency and severity of injuries compared to numbers of employees, hours worked or areas of work.

6.7 If calculated on the basis of location, occupation or task, a comparison can be made between different areas of the organisation. Higher frequency and/or severity rates indicate areas of greater priority for risk assessment and

control.

CONSULTATION WITH EMPLOYEES

6.8 Employers should take all workable steps to ensure that consultation takes place with employees, employee representatives and, where they are established, occupational health and safety committees at stages of the development, implementation and review of programs and procedures recommended in this national code of practice.

6.9 Consultation should occur when:

- (a) identifying risks;
- (b) determining the approach and methods to be used in risk assessment;
- (c) decisions are being taken on the use of risk controls;
- (d) new information becomes available on safe work practices; and
- (e) the effectiveness of implemented risk control measures and information and training programs are being evaluated.

DIRECT OBSERVATION

6.10 Direct observation of the task or workplace, together with an analysis of any relevant injury and incident records, will assist in identifying risks.

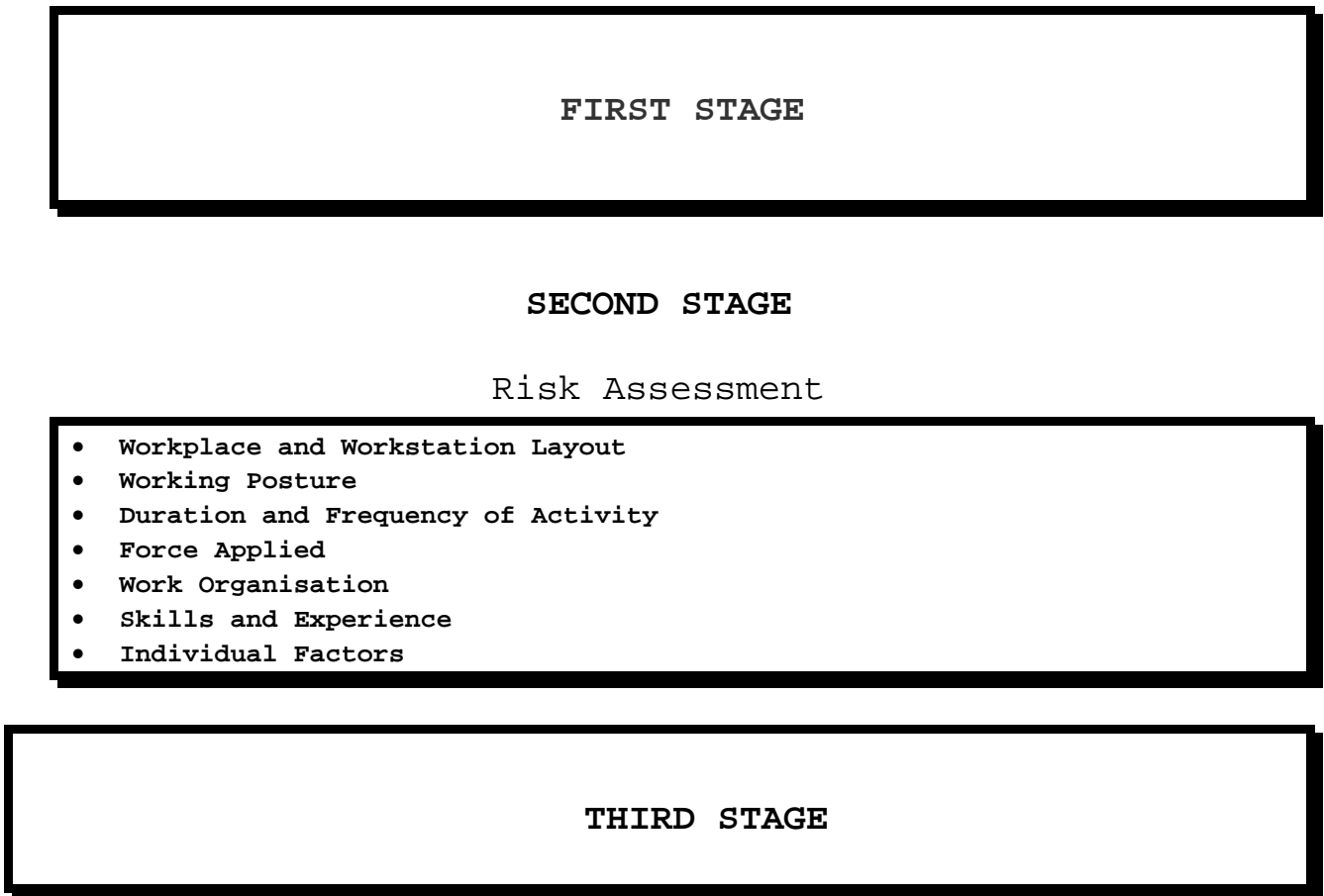
6.11 Direct observation will assist in deciding which tasks or jobs require closer examination.

6.12 Workplace inspections, audits and the use of checklists can assist in the risk identification process.

6.13 Risk Identification Checklist is provided at Appendix 2. Checklists such as this may need to be modified to suit the specific needs of the workplace.

7. RISK ASSESSMENT

Figure 4 Risk Assessment



7.1 The second stage in the process of reducing occupational overuse injuries is risk assessment.

Note: Risk identification (*see* Chapter 6 of this national code of practice) must be completed before attempting risk assessment.

7.2 The purpose of risk assessment is to assess if any identified possible risk factor is a risk to the health and safety of employees.

7.3 If the task is assessed as a risk to health and safety, the employer is required to control the risk. Proceed to Chapter 8 of this National Code of Practice and Chapter 5 of the *National Code of Practice for Manual Handling* [NOHSC: 2005 (1990)]¹ for further information on risk control.

7.4 Risk assessment should be carried out in consultation with employees and employee representatives.

7.5 Risk assessment is particularly critical whenever:

- (a) an injury has occurred arising from a work process and/or practice; and
- (b) a work process and/or practice is introduced or modified.

7.6 The assessment should take into account a range of risk factors including:

- (a) workplace and workstation layout;
- (b) working posture;
- (c) duration and frequency of activity;
- (d) force applied;
- (e) work organisation;
- (f) skills and experience; and
- (g) individual factors.

7.7 A Risk Assessment Form is provided at Appendix 3. Checklists are a useful way of performing risk assessments. Checklists such as this may need to be modified to suit the specific needs of the workplace.

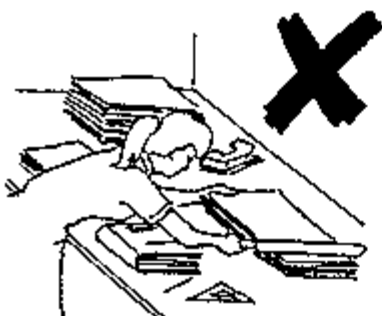
7.8 Guidance on the assessment of the risk factors outlined above follows.

WORKPLACE AND WORKSTATION LAYOUT

7.9 The layout of the workstation, plant and equipment in the workplace may place the employees at an increased risk of injury. The layout of the workplace should be appropriate for the task and matched to the employee. The employee should be able to perform the task without undue difficulty.

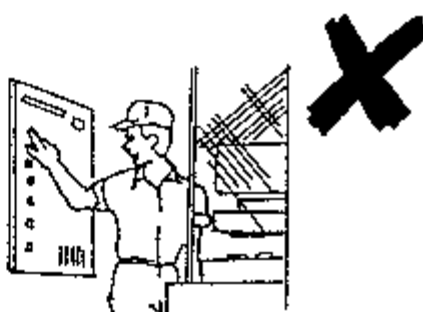
7.10 Employees may be forced to adopt sustained, inappropriate and awkward body positions with work heights which are too low or too high. Displays may be placed where they cannot be easily seen, or frequently used controls, tools and materials may be placed beyond easy reach. Such workstation layouts may result in inappropriate positions, such as bending to one side or twisting the body, which increase the risk of injury.

Figure 5



This employee has to reach too far forward in order to carry out her work

Figure 6



The employee has to twist neck, shoulders and upper body to reach the controls

WORKING POSTURE

7.11 It is important to consider the employee's posture in attempting to reduce the risk of injury. The design of the task and the workstation should aim to provide comfortable and varied working postures, particularly where there is the need to apply force, to repeat the task continuously or to sustain a position for a prolonged period of time.

Figure 7



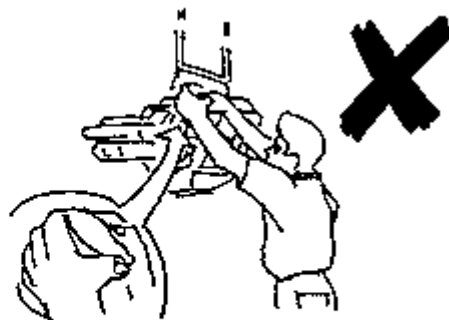
Unsatisfactory neck position because worker is reading screen through bifocal glasses

7.12 Risk of injury is increased:

- (a) where the work height varies significantly from optimum level;
- (b) where there are frequent actions which require extremes of reach, bending or twisting;
- (c) when maintaining a single posture for long periods, for example, sitting or standing;
- (d) when holding fixed body postures unsupported, for example, sitting without back support; and
- (e) when using poorly designed tools.

7.13 For most work, the optimum working height is at elbow level.

Figure 8



Task requires the arms to be held in an unsupported position and the object is difficult to grasp

7.14 For precision or close work the optimum working height is a little above elbow level and at a comfortable visual distance. Optimal working height also requires a comfortable posture with elbows supported (on the work surface or arm rests) for stability.

7.15 The optimum working height for work requiring forceful movements is a little below elbow level.

7.16 Frequent or prolonged bending and twisting of the wrist from the neutral (natural) position increases the risk of injury.

Figure 9



*Neutral (natural) position
for the wrist*

DURATION AND FREQUENCY OF ACTIVITY

7.17 Muscles when used repeatedly or when required to hold a position for any length of time will fatigue (tire). The speed at which this fatigue occurs will depend on how often the muscles move, how much force is required and how long the activity is maintained without a break. When muscles fatigue, there is an increased risk of injury.

7.18 Therefore, whenever possible, tasks should be varied within a shift to allow different muscles to be used and tired muscles to recover. The more varied the tasks, the lower the risk of injury.

FORCE APPLIED

7.19 The application of force, when used to move, restrain or hold a posture, requires muscular effort. Generally, the employee should not be required to exert forces that feel uncomfortable.

WORK ORGANISATION

7.20 The work should be designed and organised so that the employees are able to regulate their tasks, where workable, to meet work demands. Meeting tight deadlines and peak demands will increase time pressures, reduce control over workflow and may contribute to risk of injury. Bonus and piece rate systems through their effect on work rate and work organisation can be associated with injury.

SKILLS AND EXPERIENCE

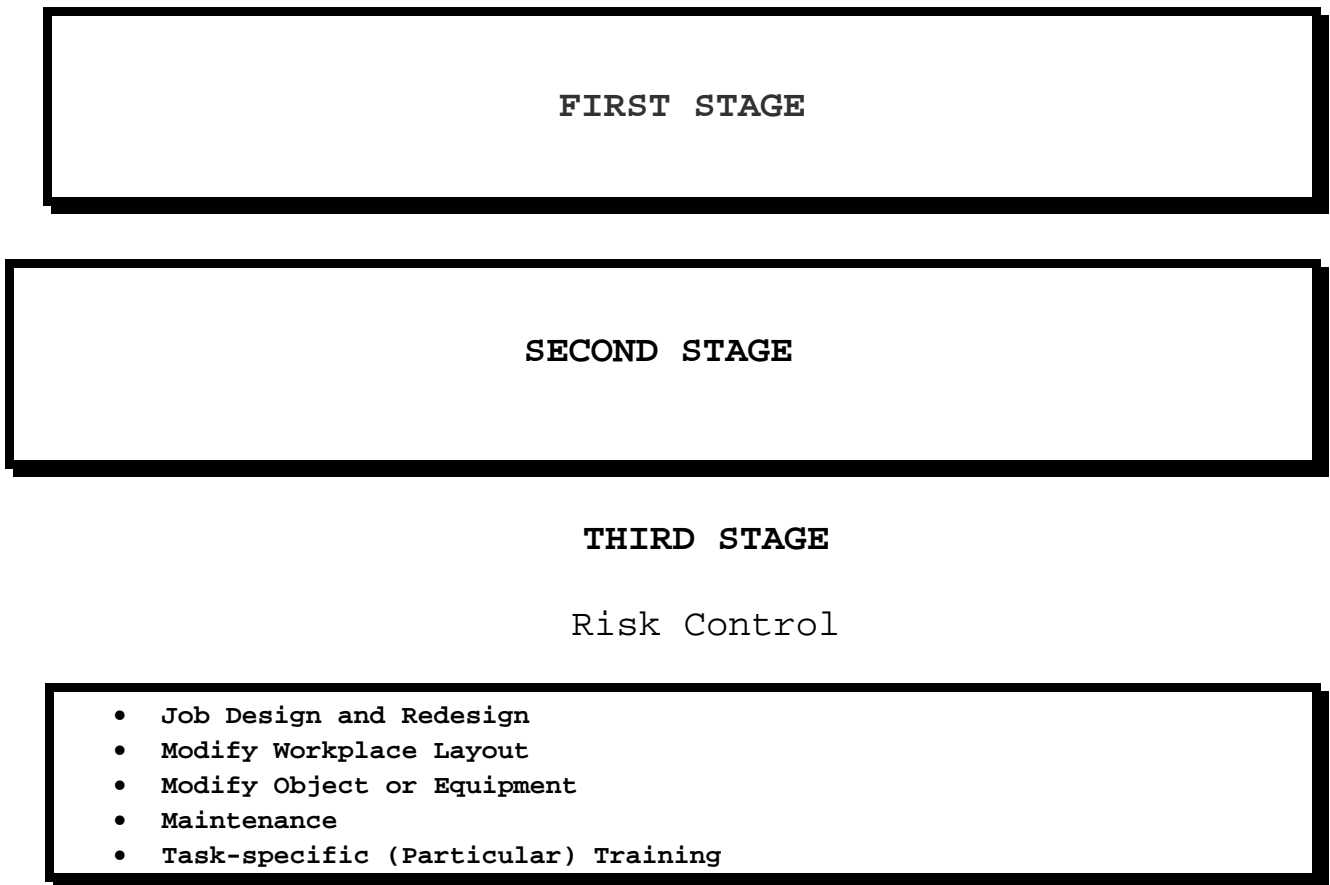
7.21 Training and education programs are essential to the success of an injury prevention strategy.

INDIVIDUAL FACTORS

7.22 When an employee is away from work, for example, two weeks or more, there may be a need for a period of adjustment to return to previous working rates. This adjustment period will depend on the individual and the length of the absence.

8. RISK CONTROL

Figure 10 Risk Control



8.1 Risk control is the process of eliminating or reducing assessed risk factors and should be carried out by the employer, the employees doing the task and employee representatives. The risk assessment (*see* Chapter 7 of this national code of practice) of the manual handling task will indicate the areas requiring attention for risk control.

8.2 This chapter sets out the options for risk control, and provides detailed guidance on those options.

8.3 The following approaches to risk control are set out in order of priority:

(a) redesign the equipment or the system of work;

(b) provide mechanical aids or devices to reduce risk, together with training in their use; and

(c) provide task-specific (particular) training to reduce risk.

A Risk Control Form and Plan is provided at Appendix 4.

RISK CONTROL HIERARCHY

8.4 There are many ways for employers to control the risk to health and safety in the workplace. When adopting measures to control risk, the hierarchy given below should be followed in selecting the approach to be taken. Measures from the top of the hierarchy should be adopted wherever workable. Measures from the bottom of the hierarchy are more difficult to maintain and should be regarded as interim measures until the preferred control options can be implemented.

Redesign to Eliminate Risk

8.5 Removal of the risk from a manual handling task is the optimum control solution. This may be achieved by redesigning the equipment or work practices, for example, changing the process to remove the need for continuous repetitive actions.

Redesign to Reduce Risk

8.6 If removing the risk is not workable, redesign the equipment or the system of work in order to substantially reduce the risk, for example, by using job rotation.

Use of Mechanical Aids or Devices to Reduce Risk

8.7 If redesign is not workable, provide and maintain any device that will assist employees to carry out their tasks without risk of injury. Training in the use of such mechanical aids or devices should be provided, for example, use of a balancer to suspend a tool to counteract the effect of gravity.
Task-specific (Particular) Training to Reduce Risk

8.8 If none of the above controls are workable, provide training in methods of carrying out the task to reduce risk of injury.
Combining Risk Control Priorities

8.9 It is likely that for many jobs the application of these types of controls will not be mutually exclusive. In some jobs, it may be appropriate to redesign some parts and provide mechanical aids.

RISK CONTROL OPTIONS

8.10 For particular risk factors, there is a range of risk control options.

8.11 It is most cost effective to reduce risk factors at the design stage. Additional costs are incurred in redesigning or modifying plant or processes once they are being used in the workplace. Purchasing specifications should specify the uses of the plant and equipment and the general performance characteristics required to reduce the risk to health and safety.

8.12 Where design or equipment purchase occurs, appropriate consultation should be undertaken in accordance with Chapter 5 of this national code of practice.

8.13 Employers should take account of the need for workplaces to be designed to accommodate both right-handed and left-handed employees, that is, the use of the dominant hand.

8.14 The control options examined in detail in the remainder of this chapter are:

- (a) job design and redesign;

- (b) modify workplace layout;
- (c) modify object or equipment;
- (d) maintenance; and
- (e) task-specific (particular) training.

8.15 Individual control options may be used to address more than one risk factor.

JOB DESIGN AND REDESIGN

8.16 Job design is an important key to reducing risk of injury.

8.17 The aim of job design is to take into account all the factors which affect the work, and to design and arrange the work content and tasks so that the whole job is without likely risk to the health and safety of the employee.

8.18 Where workable, single task, repetitive jobs should be avoided or redesigned to eliminate such repetitive tasks.

8.19 Wherever workable, jobs should be designed so that they include a mixture of repetitive and non-repetitive work. For example, a word processor's job may be redesigned so that job content is varied to include a number of different tasks that are at the same level of responsibility.

8.20 Job rearrangement or redesign encourages a number of varied activities and postures rather than sitting at one workstation. For example, the tray containing new work for the word processor may be placed on a table a distance away from the keyboard workstation, necessitating the employee walking to get the work. The printer also may be located so that the employee has to get up to retrieve work. An important caution in job redesign is not to provide similar tasks consecutively.

Duration and Frequency

8.21 Similar tasks, repeated over long periods, may fatigue (tire) muscles and increase the risk of injury.

8.22 How often, and for how long, a task is performed are risk factors to be considered.

Work Rates

8.23 Where work rates need to be established, employers should consult with the employees concerned and employee representatives to determine realistic and safe work rates.

8.24 Employee performance varies between individuals and over time, and can be influenced by work and equipment factors. In determining safe work rates, some of the factors that need to be considered are:

- (a) physical variations between individuals;
- (b) skills, knowledge and experience of employees;
- (c) type of work and equipment;
- (d) introduction of new work and equipment;

- (e) efficiency of the work process;
- (f) duration of working time; and
- (g) standard of work required.

Machine Pacing

8.25 Machine pacing poses a risk if the pace is too fast or too slow. Alternatives should be considered. If alternatives are not workable, then buffer zones are an effective way to reduce risks from machine pacing, and to enable the employee to control the flow of work. An example of a buffer zone is a system which allows items to be taken off the production line when it is moving faster than the employee's comfortable pace so that the employee can process it later.

8.26 A production line which allows the employee to process items at their optimal pace has the same effect as a buffer zone.

Electronic Monitoring

8.27 The use of electronic monitoring to pace employees' work is not recommended as it can cause individual employees to work at rates beyond their capacity, placing them at risk.

8.28 Some of the limitations of electronic monitoring for assessing work performance are that it fails to take into account factors such as:

- (a) human variation;
- (b) variations in equipment performance;
- (c) capacity of the employee;
- (d) variation in the period of time taken to reach an optimum level of skill;
and
- (e) quality of work.

Bonus and Incentive Schemes

8.29 Some bonus and incentive schemes may contribute to the risk of injury. These schemes may encourage employees to work beyond their individual capacities.

8.30 Any such scheme should therefore be designed taking these factors into account.

Peak Demand

8.31 Many jobs have predictable peak periods which may result in large variations in job demand. The increased risks generated during these peak periods may be prevented by long term planning of resources and organisation of tasks.

Work Breaks

8.32 Where the job requires a sustained period of repetitive or static (holding or restraining) activity, and it is not possible to provide effective task variation, rest breaks should be provided. The exact length and frequency of such breaks will depend on the nature of the tasks which make up the job.

Working Hours

8.33 Where work involves repetitive or forceful movement or both, and/or maintenance of constrained or awkward postures, management, supervisors and employees need to be aware of the risk factors associated with extended working hours, for example, overtime, 12 hour shifts, short intervals between shifts and split shifts. Overall organisation of shifts will need to be designed to take into account the potential impact on employees of factors such as fatigue and workload.

MODIFY WORKPLACE LAYOUT

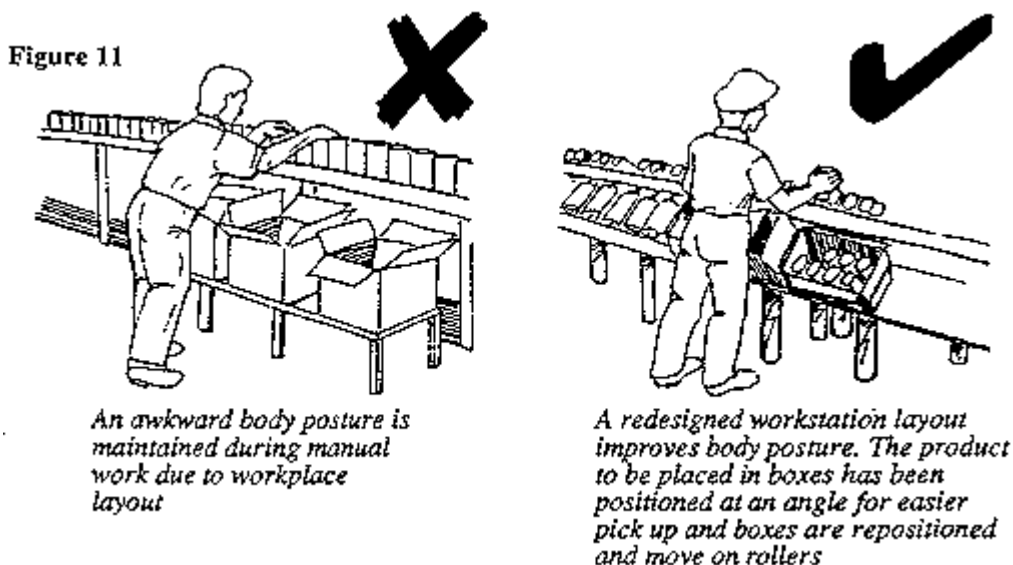
8.34 Wherever a task can be effectively performed from a sitting position, the employer should ensure that seating matched to the individual and task is provided and maintained.

8.35 Where the work cannot be performed effectively from a sitting position, but it is possible for workers to sit from time to time while performing the task, the employer should ensure that suitable seats are provided to enable the employees to take advantage of these opportunities.

8.36 Posture should be varied between sitting and standing positions where possible to reduce the effects of tiredness from maintaining one position for too long.

8.37 The most appropriate working positions should be determined by consideration of:

- (a) the tasks that are performed;
- (b) the frequency and duration of tasks;
- (c) the materials, equipment and tools used (Figure 11); and
- (d) the individual's ability to adopt a safe body posture.

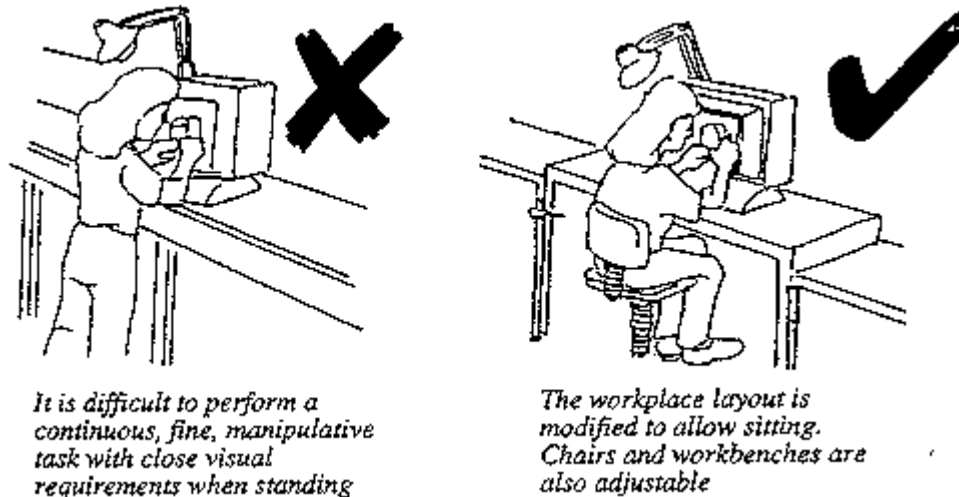


Sitting at Work

8.38 A seated position is required for:

- (a) accurate control and fine manipulation;
- (b) light manual work (continuous); and
- (c) close visual work with prolonged attention, for example, continuous keyboard work or electronic assembly (Figure 12).

Figure 12



Selecting Seating

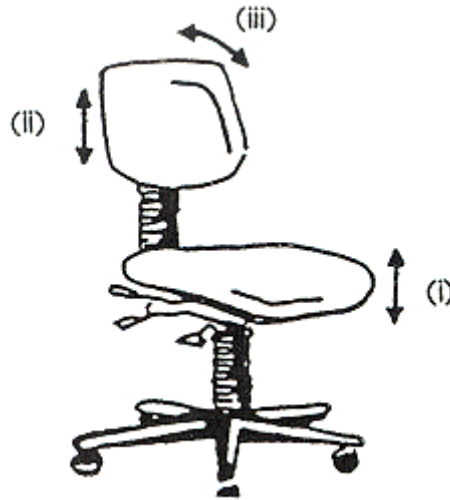
8.39 Chairs selected for use in the workplace should meet the following basic requirements:

- (a) be easily adjustable in respect to:
 - (i) seat height,
 - (ii) backrest height, and
 - (iii) backrest angle;
- (b) have appropriate dimensions, for example, seat depth and width;
- (c) have padded seat and backrest; and
- (d) be safe and stable.

Note 1: In some situations, seating without backrests may be appropriate.

Note 2: Further information may be obtained from Australian Standard AS 3590 *Screen-based Workstations, Parts 1, 2 and 3*⁶ and *Worksafe Australia's Ergonomic Principles and Checklists for the Selection of Office Furniture and Equipment*⁷.

Figure 13



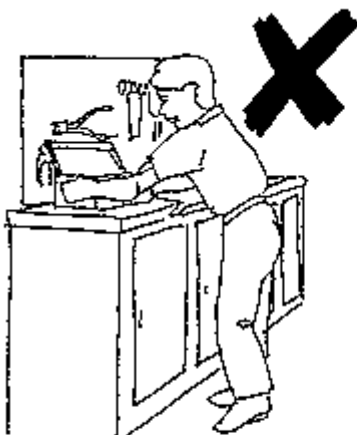
Chairs should be easily adjustable in respect to (i) seat height (ii) backrest height and (iii) backrest angle

Standing at Work

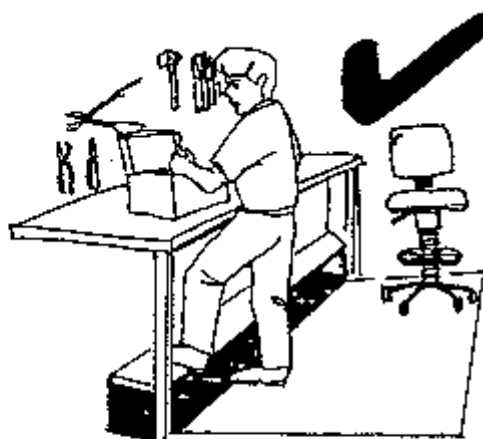
8.40 A standing position is generally required where:

- (a) heavy, bulky loads are involved;
- (b) forceful movements are involved;
- (c) there are frequent moves from the workstation;
- (d) no knee room is provided; and
- (e) there is limited space.

Figure 14



The workplace layout restricts knee and foot space and limits postural changes



Workplace layout is improved by providing knee space, a footrest and a cushioned mat for standing. The layout is also designed to offer an opportunity to sit

Work Surface Height

8.41 The optimum height of the work surface is determined by the type of work, the visibility of the task, reach distances, and the force and speed of work movements. The elbow with the arm by the side is used as the point of reference for the following:

- (a) A task which requires considerable force or uses the body for leverage, for example, hammering or drilling at a workbench, should be done at hip height (Figure 15).
- (b) A task which requires limited force and a range of arm movements using the shoulder, for example, taking items from a stack and placing them on a conveyor, should be done at between elbow and hip height (Figure 16).
- (c) A task which requires precision and minimal force, for example, assembly work, should be done at just above elbow height. Where a sustained posture is required for precision work, the forearms should be suitably supported (Figure 17).
- (d) A task which does not require the hands to make a wide range of movements and where the elbows may rest on the work surface, for example, when writing, should be done at just above elbow height (Figure 18).
- (e) A task which requires the use of a keyboard should be done at elbow height with arm movement unrestricted by such things as armrests and cluttered work surfaces (Figure 19).

Figure 15



Figure 16

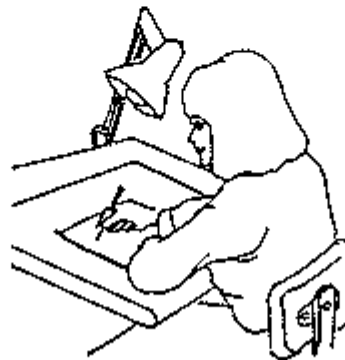


Figure 17



Work surface heights for standing work

Figure 18



A writing task should be done at just above elbow height

Figure 19



A keyboard task should be done at elbow height

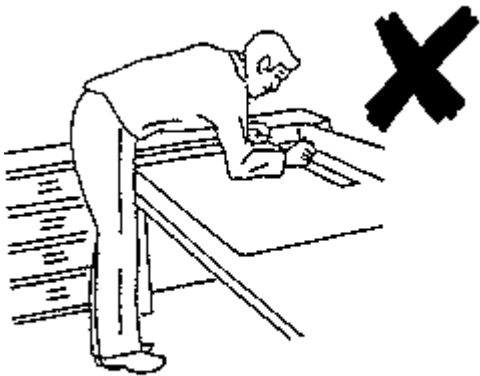
8.42 Because of differences in stature, a single work surface height may not be suitable for all workers. Adjustable workstations, where workable, allow work surface heights to be quickly matched to a range of workers.

Visual Requirements

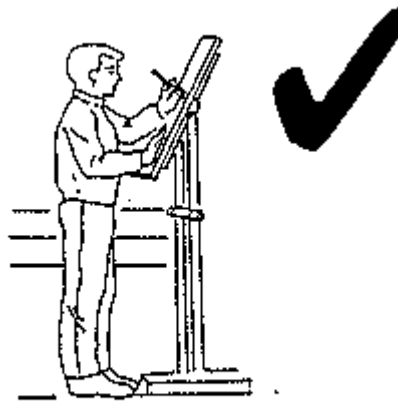
8.43 Precision work is also visually demanding. In such situations, the work object should be placed higher than the forearm rest, in order to meet visual demands.

8.44 The use of sloping work surfaces or workstations may be necessary for some tasks to meet the visual and postural demands (Figures 20).

Figure 20



The visual requirements of the task lead to an awkward posture

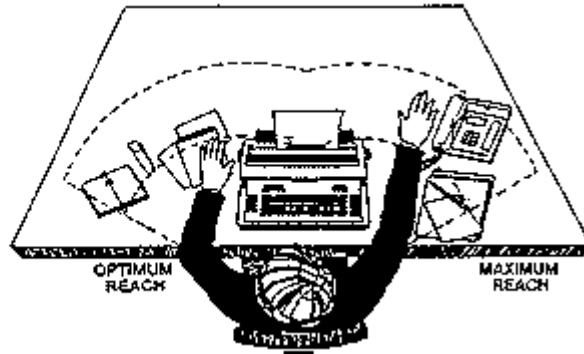


The same visual requirements with an improved workplace layout

Workstation Layout

8.45 As a general guide, work activities or controls of most importance, of highest use and/or requiring rapid activation should be in front of the employee and within easy reach (Figure 21).

Figure 21



Displays and Control Instruments

8.46 The appropriate design, selection, arrangement and labelling of displays and control instruments is essential for safe operation of equipment, and will assist in correct posture.

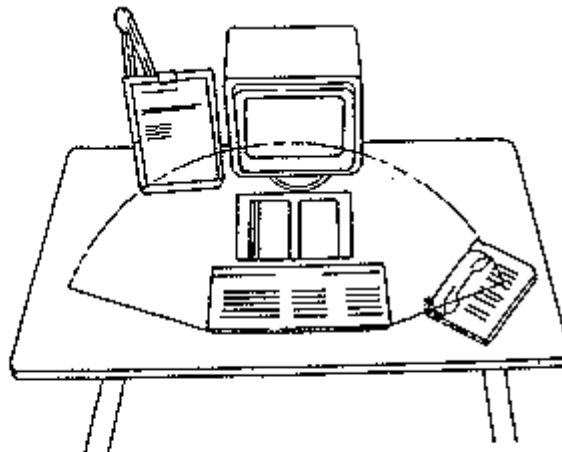
8.47 A sensible layout of both displays and control instruments will make monitoring easier, reduce the risk of confusion caused by misreading, and reduce visual and postural strain.

Screen-based Equipment

8.48 For work with screen-based equipment, the relative position of the screen, keyboard and document holder should be determined by the task (Figure 22). Large work spaces and adjustable equipment allow task requirements, and individual preferences and needs to be accommodated.

8.49 Australian Standard AS 3590 *Screen-based Workstations, Parts 1, 2 and 3*⁶ provides information on the construction, performance requirements, functions and basis for selection of visual display units (Part 1), workstation furniture (Part 2) and input devices (Part 3).

Figure 22



The relative position of the screen, keyboard and document holder should be determined by the user and the task

MODIFY OBJECT OR EQUIPMENT

8.50 Appropriate steps should be taken to ensure that work practices and all equipment (including keyboards) and tools used in the workplace are safe and do not pose a risk of injury.

8.51 The design of plant, equipment (including keyboards) and workplaces needs to provide for the range of physical characteristics of the workforce.

Hand Tools

8.52 The overall aim in the design, selection and use of hand tools is to ensure the employee can use the hand tool in a safe and effective way.

Tool Orientation and Wrist Positions

8.53 Problems can arise with prolonged use and maintenance of extreme positions (Figure 23), repetition of movements and the use of excessive force (Figure 24), and these positions or movements should be avoided.

Figure 23

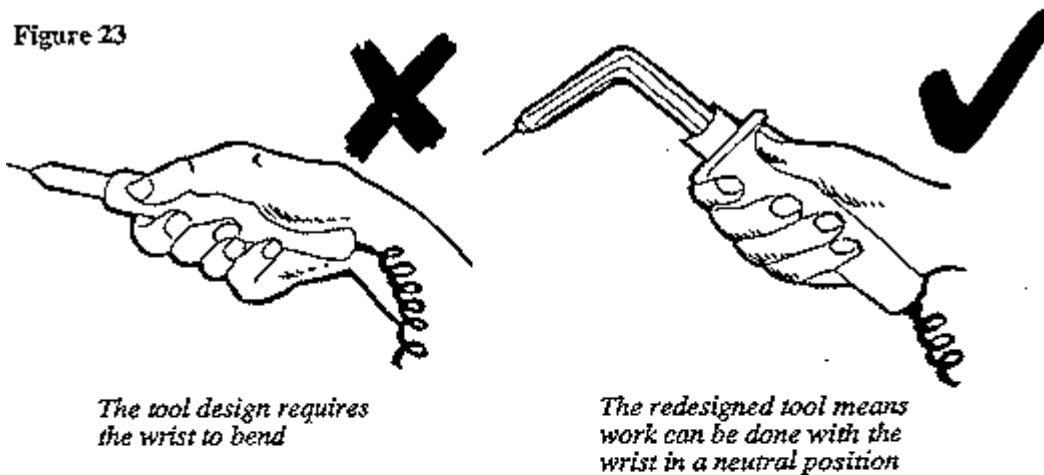
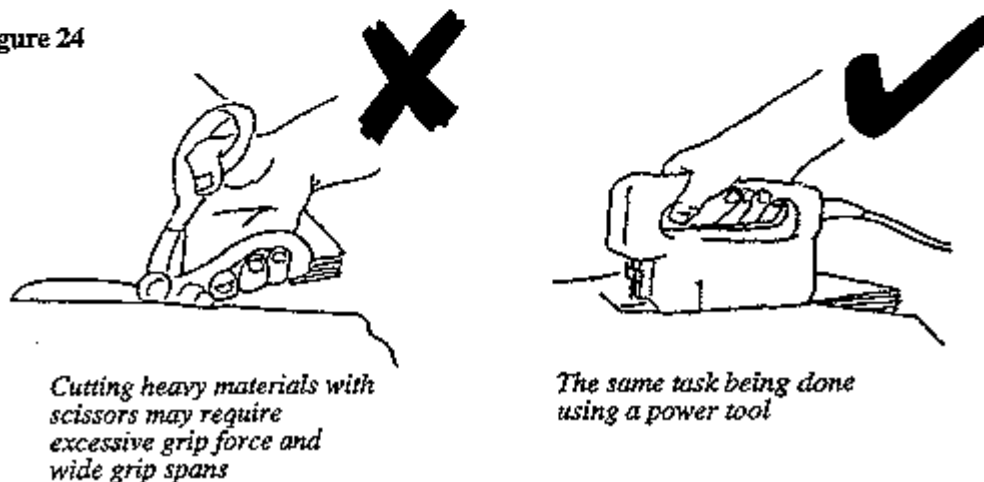


Figure 24



Tool Size and Shape

8.54 Hand tools should be appropriate for the task, comfortable and well-balanced.

8.55 The tool handle should be easily grasped by both small and large-handed employees.

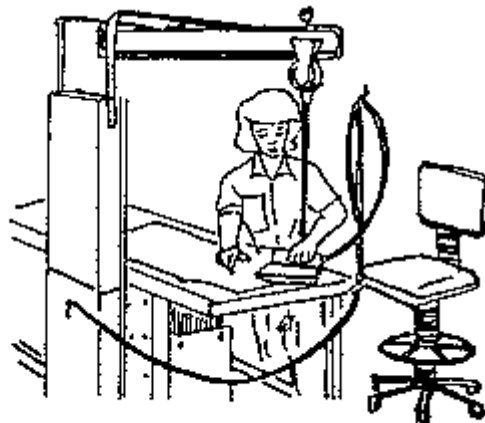
Shock Loadings

8.56 Repeated shocks to the hand and wrist as in the repetitive use of hammers for assembly; tugging at cloth, wires or threads; or using jerky movements or sustaining sudden twisting forces from hand-held power tools, should be avoided. Such shock loadings, with repetition over a sustained period, may have a cumulative damaging effect.

Balancers

8.57 Suspending power tools from balancers can relieve muscle fatigue in repetitive work. Well-designed balancers will counteract the effect of gravity. Attention should be paid to the appropriate adjustment of balancers (Figure 25).

Figure 25



Well-designed balancers for the ironing task assist in minimising fatigue

MAINTENANCE

8.58 Improved maintenance may reduce the risk of injury. Equipment which has been regularly maintained to specification, for example, a mechanical part which has been regularly oiled, may require the exertion of less force to activate, thereby reducing the risk of injury.

TASK-SPECIFIC (PARTICULAR) TRAINING

8.59 The use of task-specific (particular) training as a control measure applies in the situation where risk factors have been assessed and it has not been workable to carry out job modification or to provide and use mechanical aids to reduce the risk.

8.60 For guidance on both task-specific (particular) and general training, refer to Chapter 5.

RISK CONTROL - FURTHER GUIDANCE

MODIFY WORKPLACE LAYOUT

A1.1 Further guidance on the control of manual handling risks through modifications to the workplace layout are outlined below. In particular, information on tool design is provided.

DISPLAYS AND CONTROL PANELS

A1.2 The following guidelines will assist in selecting the type and position of control instruments:

- (a) Fingers and hands should be used for quick, precise movements. Arms and feet should be used for operations requiring force.
- (b) Distance between control instruments should take account of human physical requirements. The size of knobs, switches or control instruments should relate to whether they are operated by the fingers or the whole hand.
- (c) Machines with both foot and hand control instruments are not recommended where the employee stands while working. If the foot pedal cannot be avoided, it should be restricted to operating an on-and-off switch.

SCREEN-BASED EQUIPMENT

A1.3 Some practical suggestions regarding screen-based equipment are:

- (a) If the source document is the primary object viewed, then the document holder should be positioned in front of the keyboard user and the screen positioned on one side.
- (b) If the screen and document are viewed equally, then the screen and document holder should be:
 - (i) side by side, at the same height in front of the user, or
 - (ii) placed in the midline, with the document holder above the keyboard and below the screen.
- (c) If the screen is the primary object viewed, then the screen should be positioned in front of the keyboard user at a suitable height and the document holder positioned on one side.

HAND TOOLS

A1.4 A hand tool should be:

- (a) appropriate to the task;
- (b) appropriate to the work surface height;
- (c) properly proportioned to the body dimensions of the employee;
- (d) appropriate to the strength and endurance of the employee;
- (e) maintained in good working order;
- (f) available in both left and right hand versions, where appropriate; and

(g) selected with the aim of minimising vibration and sudden impact forces.

TOOL ORIENTATION AND WRIST POSITIONS

A1.5 Some guidelines regarding tool orientation and wrist positions are:

- (a) The number and range of wrist movements should be kept to a minimum.
- (b) Prolonged, unsupported positioning of the wrist without movement should be avoided.
- (c) Bending, twisting or holding the wrist should be avoided, particularly over long periods or if using heavy pressure.
- (d) Handles on many handheld tools can be redesigned to bend the tool rather than the wrist.
- (e) Choosing tools which enable neutral wrist positions requires analysis of the tasks.

GRIP TYPES AND FORCES

A1.6 The need for excessive force in squeeze grips, for example, where cutting heavy wires, should be avoided.

A1.7 If excessive force is necessary, consider whether the tool is appropriate. Care must be taken to keep the wrist neutral and minimise the application of force.

A1.8 Grip force should be distributed across the breadth of the hand by increasing the surface area to be gripped.

A1.9 Hand-held power tools should be selected and adjusted, for example, set torque, appropriately to the demands of the task.

A1.10 Excessively wide grip spans, as in gripping wide-opening tool handles or a large object in one hand, should be avoided. In particular, a wide range of thumb movements requiring pressure to be applied should be avoided. An example is the type of thumb movement required in using scissors to cut heavy material.

TOOL SIZE AND SHAPE

A1.11 Excessive shaping of tool handles, such as providing separate grooves for each finger, should generally be avoided because the grooves may dig into the fingers causing excessive pressure.

A1.12 The tool handle should be long enough so that the end of the tool handle does not dig into the palm of the hand, where it may impair blood circulation.

A1.13 Tool handles with spring returns, such as pliers, scissors and wire cutters, can assist in performing the task.

TRIGGERS

A1.14 Triggers should be designed for ease of use and to minimise fatigue. Some ways of minimising force are to provide:

- (a) larger surface areas on triggers; and
- (b) triggers which are easy to activate and to maintain activation.

RISK IDENTIFICATION CHECKLIST

A2.1 Outlined below is an example of a Risk Identification Checklist. Checklists are useful tools to assist in the direct observation of workplace practices and the identification of risks. This checklist is provided as an example and may need to be modified to suit the needs of individual workplaces.

A2.2 Checklists should be completed in consultation with employees and employee representatives.

A2.3 The checklist provided refers to the National Code of Practice for Manual Handling [NOHSC:2005(1990)] and the National Code of Practice for the Prevention of Occupational Overuse Syndrome [NOHSC:2013(1994)].

**RISK IDENTIFICATION CHECKLIST
NATIONAL CODE OF PRACTICE FOR THE PREVENTION OF
OCCUPATIONAL OVERUSE SYNDROME [NOHSC:2013(1994)]**

COMPLETE IN CONSULTATION WITH EMPLOYEES
AND EMPLOYEE REPRESENTATIVES

Day/Month/Year

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Description of work location

Task or workstation

Assessed by the employer:

Position

In consultation with the following employee(s):

Position

And in consultation with the following employee representatives:

Position

Have there been any injury or incident records related to the task or workstation at this workplace?

Yes No

This Risk Identification Checklist has been developed for general use. It may be modified to suit the specific needs of a workplace.

Completing this Risk Identification Checklist should only take a short time.

Answers to the following questions are useful when assessing specific tasks. If 'Yes' is ticked, this indicates a need to complete risk assessment for this question. In such cases, use the Risk Assessment Form at Appendix 3 and consult Chapter 7 of this national code of practice.

If unsure or undecided, tick 'Yes'.

* **MH Code** =National Code of Practice for Manual Handling
[NOHSC:2005(1990)]

* **OOS Code** =National Code of Practice for the Prevention of
Occupational Overuse Syndrome[NOHSC:2013(1994)]

- TASK** Yes No
If Yes see OOS Code 7.9 to 7.16
1. Is frequent or prolonged stooping involved where the hands pass below mid-thigh height?
 Yes No
If Yes see MH Code 4.6 and 4.20 and OOS Code 7.9 to 7.16
2. Yes No
If Yes see MH Code 4.6 and 4.20 and OOS Code 7.9 to 7.16
3. Is frequent or prolonged reaching above the shoulder involved?
 Yes No
If Yes see MH Code 4.6 and 4.20 and OOS Code 7.9 to 7.16
4. Is there a vertical distance of travel more than 25 cm.
 Yes No
If Yes see MH Code 4.6 and 4.20 and OOS Code 7.9 to 7.16
5. Is frequent or prolonged sideways twisting of the body involved?
 Yes No
If Yes see MH Code 4.6 and 4.20 and OOS Code 7.9 to 7.16
6. Does any action require maintaining a force, for example, holding a grip or position for more than 10 seconds?
 Yes No
If Yes see OOS Code 7.17 to 7.18
7. Does the task require maintaining a fixed or awkward position, particular of the neck and/or arms?
 Yes No
If Yes see OOS Code 7.9 to 7.16
8. Is the task done for more than one hour at a time?
 Yes No
If Yes see MH Code 4.14 to 4.20 and OOS Code 7.17 to 7.18
9. Is the task done more than once every five minutes?
 Yes No
If Yes see MH Code 4.14 to 4.20 and OOS Code 7.17 to 7.18
10. Are similar actions repeated for more than one hour in a work day or shift?
 Yes No
If Yes see OOS Code 7.17 to 7.18
11. Are similar actions repeated, for example, more than several times a minute?
 Yes No
If Yes see OOS Code 7.17 to 7.18

LOAD

12. Apart from lifting or lowering, is it difficult to push, pull, restrain, hold or otherwise move the object?

Yes No

**If Yes what action is involved?
Specific action.**

pushing Yes

pulling Yes

restraining Yes

holding Yes

**If Yes see MH Code 4.21 to 4.26 and
OOS Code 7.11 to 7.19**

13. Is the weight of the object:

a) More than 4.5 kg and handled from a seated position?

Yes No

**If Yes see MH Code 4.21 to 4.26 and
OOS Code 7.11 to 7.16 and 7.19**

(b) More than 16 kg and handled in a working posture other than seated?

Yes No

**If Yes see MH Code 4.21 to 4.26 and
OOS Code 7.11 to 7.16 and 7.19**

(c) More than 55 kg?

Yes No

**If Yes see MH Code 4.21 to 4.26 and
OOS Code 7.11 to 7.16 and 7.19**

Note: Weight is not used to prescribe absolute limits, but is one of the important factors to be considered when assessing and controlling risk.

14. Is the object bulky or awkward (more than 75 cm in two dimensions)?

Yes No

If Yes see MH Code 4.27 to 4.31

15. If unbalanced, uneven or one-handed lifting or carrying involved?

Yes No

**If Yes see MH Code 4.6 to 4.13 and
4.31 and OOS Code 7.9 to 7.16**

16. Is awkward grip involved?

Yes No

**If Yes see MH Code 4.6 to 4.13 and
4.31 and OOS Code 7.9 to 7.16 and
7.19**

17. Are slippery materials/objects handled?

Yes No

**If Yes see MH Code 4.6 to 4.13 and
4.31 and OOS Code 7.9 to 7.16 and
7.19**

18. Does the object have sharp edges or contain hot/cold materials?

Yes No

If Yes see MH Code 4.27 to 4.31

19. Does the object have unbalanced contents or contents that may move?

Yes No

If Yes see MH Code 4.27 to 4.31

20. Are the tools and equipment awkward or uncomfortable to use?

Yes No

**If Yes see OOS Code 7.11 to 7.16,
7.19, 7.21 and 7.22**

21. Are there live persons or animals being moved?

Yes No

If Yes see MH Code 4.27 to 4.31

WORK ENVIRONMENT

22. Does the workplace layout require awkward actions or movements?

Yes No

If Yes see MH Code 4.27 to 4.31

23. Is the task done in a restricted space

Yes No

If Yes see MH Code 4.8 to 4.10 and 4.34 to 4.36

24. Is the workplace hot, cold or poorly lit?

Yes No

If Yes see MH Code 4.34 to 4.36

25. Are the floor surfaces slippery or uneven?

Yes No

If Yes see MH Code 4.34 to 4.36

26. Are there restrictions imposed by personal protective equipment for this task?

Yes No

If Yes see MH Code 4.43

WORK ORGANISATION

27. Are any of the following factors present in the workplace and apply to the task?

(a) Peaks or sudden increased in workload?

Yes No

(b) Work requiring speed?

Yes No

(c) Staff shortages?

Yes No

(d) Bonus/incentive schemes?

Yes No

(e) Overtime work?

Yes No

If Yes see MH Code 4.32 to 4.33 and OOS Code 7.20 to 7.22

29. Is the task done by young employees, older employees or those with an ongoing disability?

Yes No

If Yes see MH Code 4.39 to 4.42 and 4.44 and OOS Code 7.20 to 7.12

If you have answered 'Yes' to any question, use the Risk Assessment Form and Plan at Appendix 3 and consult Chapter 7 of this national code of practice to complete risk assessment.

RISK ASSESSMENT FORM

A3.1 Outlined below is an example of a Risk Assessment Form. Forms or checklists such as this are useful to assist in the assessment of risk. This form is provided as an example and may need to be modified to suit the needs of individual workplaces.

A3.2 Where the assessment indicates an increased risk, there will be a need to control that risk.

A3.3 Where a form such as this is used, it should be developed and completed in consultation with employees and employee representatives.

**RISK ASSESSMENT FORM
NATIONAL CODE OF PRACTICE FOR THE PREVENTION OF
OCCUPATIONAL OVERUSE SYNDROME [NOHSC:2013(1994)]**

COMPLETE IN CONSULTATION WITH EMPLOYEES
AND EMPLOYEE REPRESENTATIVES

This form is to be used in conjunction with Chapter 7 of this national code of practice.

The Risk Identification Checklist (Appendix 2) of this national code of practice should be completed before using this form.

For further information on assessing risks for tasks that involve manual handling, refer to Chapter 4 of the National Code of practice for Manual Handling [NOHSC:2005(1990)].

Day/Month/Year

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Description of work location

Task or workstation

Assessed by the employer:

Position

In consultation with the following employee(s):

Position

And in consultation with the following employee representatives:

Position

A 'Yes' response to any of these questions in the Risk Assessment Form indicates risk of injury. In such cases, use the Risk Control Form and Plan at Appendix 4 and consult Chapter 8 of this national code of practice to eliminate or reduce risks.

**7.9 and 7.10 WORKPLACE
AND WORKSTATION LAYOUT**

1. Are any frequently handled objects, eg controls, tools or material, positioned beyond easy reach?
- Yes No
2. Does the layout of the workplace result in excessive twisting or bending of the neck, shoulders or upper body?
- Yes No
3. Are controls, switches or keys on tools, equipment or instruments positioned in such a way that they are difficult to grasp or activate?
- Yes No
4. Are displays difficult to read from the person's usual work position?
- Yes No

7.11 to 7.16 WORKING POSTURE

5. Are working heights fixed (that is, not adjustable to match the height and size of the employees to their optimum working height)?
- Yes No
6. Does the working height vary significantly from the optimum working height?
- Yes No
7. If fine assembly or writing tasks are performed for most of the shift, is there a lack of support for the forearm?
- Yes No

8. Is most of the task performed where the wrists are not in a neutral (natural) position?

- Yes No

9. Is most work performed with the upper arms in an unsupported position away from the body (with or without discomfort)?

- Yes No

10. Does the task require the employee to work with arms outstretched from the body for at least one minute without rest?

- Yes No

11. Does the task require an employee to work continuously or repetitively above shoulder level for at least 30 seconds?

- Yes No

12. Does the task require part (eg neck) or all of the body to be held in a fixed position so that it causes discomfort, for example, a task that requires looking upwards or downwards for long periods of time?

- Yes No

13. Does the task require an employee to maintain an awkward position for at least 30 seconds?

- Yes No

14. Is the employee required to bend frequently at low working heights to handle objects?

- Yes No

15. Does the shape, width, length and texture of the tool handle cause discomfort?

- Yes No

16. If an object is handled, is the object presented to an employee in a position that makes it difficult to grasp or hold?

Yes No

Yes No

If you have answered 'Yes' to any ques

7.17 and 7.18 DURATION AND FREQUENCY OF ACTIVITY

17. Do the tasks performed in a working day lack variety, for example, typing for a full day or packaging for a full shift?

Yes No

18. Are the task demands such that the employee lacks control over the pace of work?

Yes No

19. Is the employee unable to take breaks, for example, working on a process line without any relief?

Yes No

20. Are there any repetitive tasks which require an employee to maintain an unsupported fixed position and which take longer than 30 seconds?

Yes No

7.19 FORCE APPLIED

21. Does the employee experience discomfort when required to apply force repetitively or continuously?

Yes No

22. Is the employee required to repetitively use grip spans that cause discomfort?

7.20 WORK ORGANISATION

23. Is there an inadequate number of staff to meet work demands?

Yes No

24. Is regular overtime worked in jobs involving repetitive work?

Yes No

25. Is there a lack of appropriate relief staff to cover peak demand and absences?

Yes No

26. Is there inadequate time to meet targets set?

Yes No

7.21 SKILLS AND EXPERIENCE

27. Is there a lack of employee training appropriate to the task?

Yes No

7.22 INDIVIDUAL FACTORS

28. If the employee is a new staff member, or has recently returned from leave, is the employee expected to perform at the regular pace or level without re-adjustment to the workload?

Yes No

If you have answered 'Yes' to any question, use the Risk Control Form and Plan at Appendix 4 and consult Chapter 8 of this national code of practice to select the optimal control option for each task that has been assessed as a risk

**RISK CONTROL FORM AND PLAN
NATIONAL CODE OF PRACTICE FOR THE PREVENTION OF
OCCUPATIONAL OVERUSE SYNDROME [NOHSC:2013(1994)]**

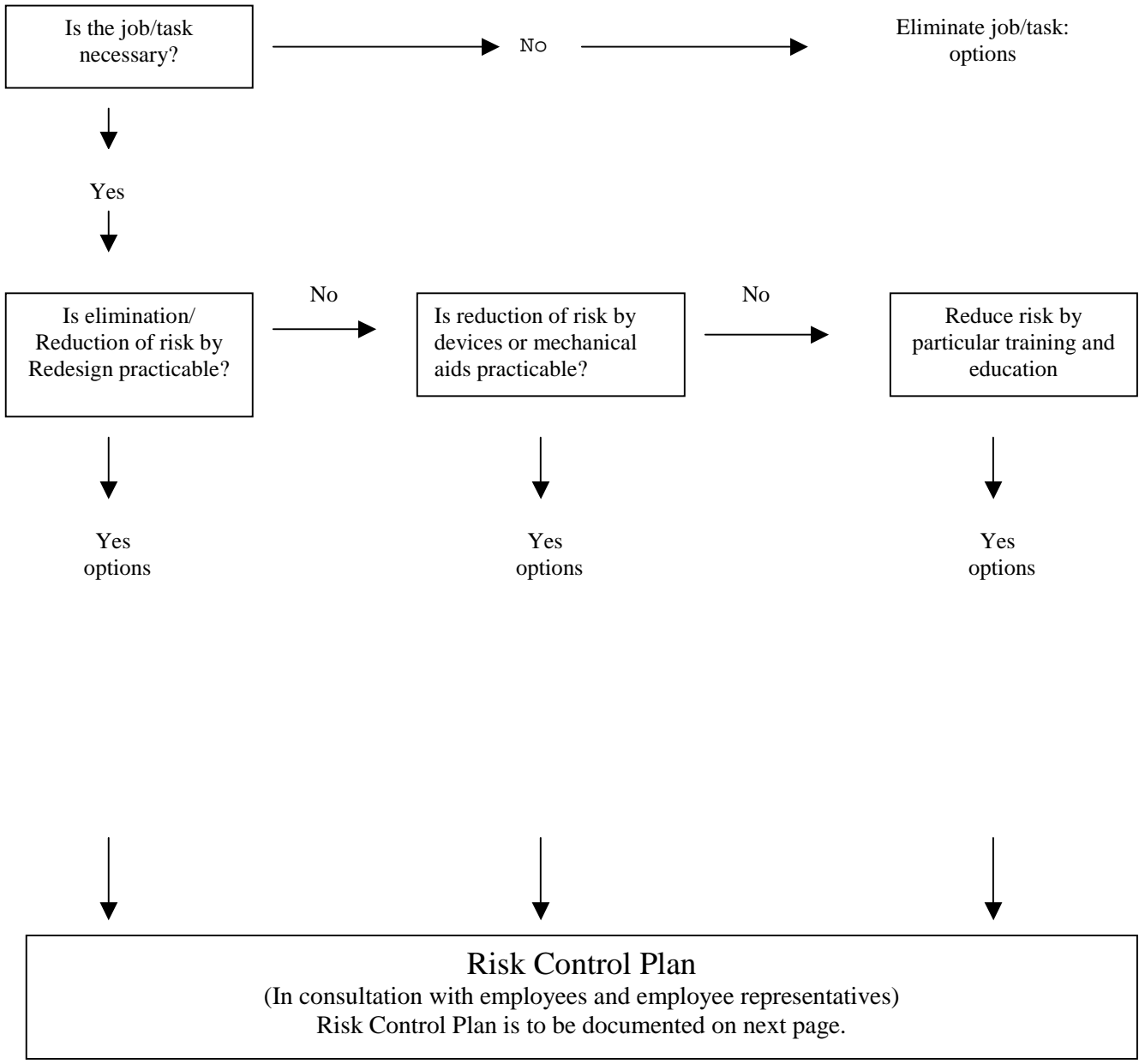
COMPLETE IN CONSULTATION WITH EMPLOYEES
AND EMPLOYEE REPRESENTATIVES

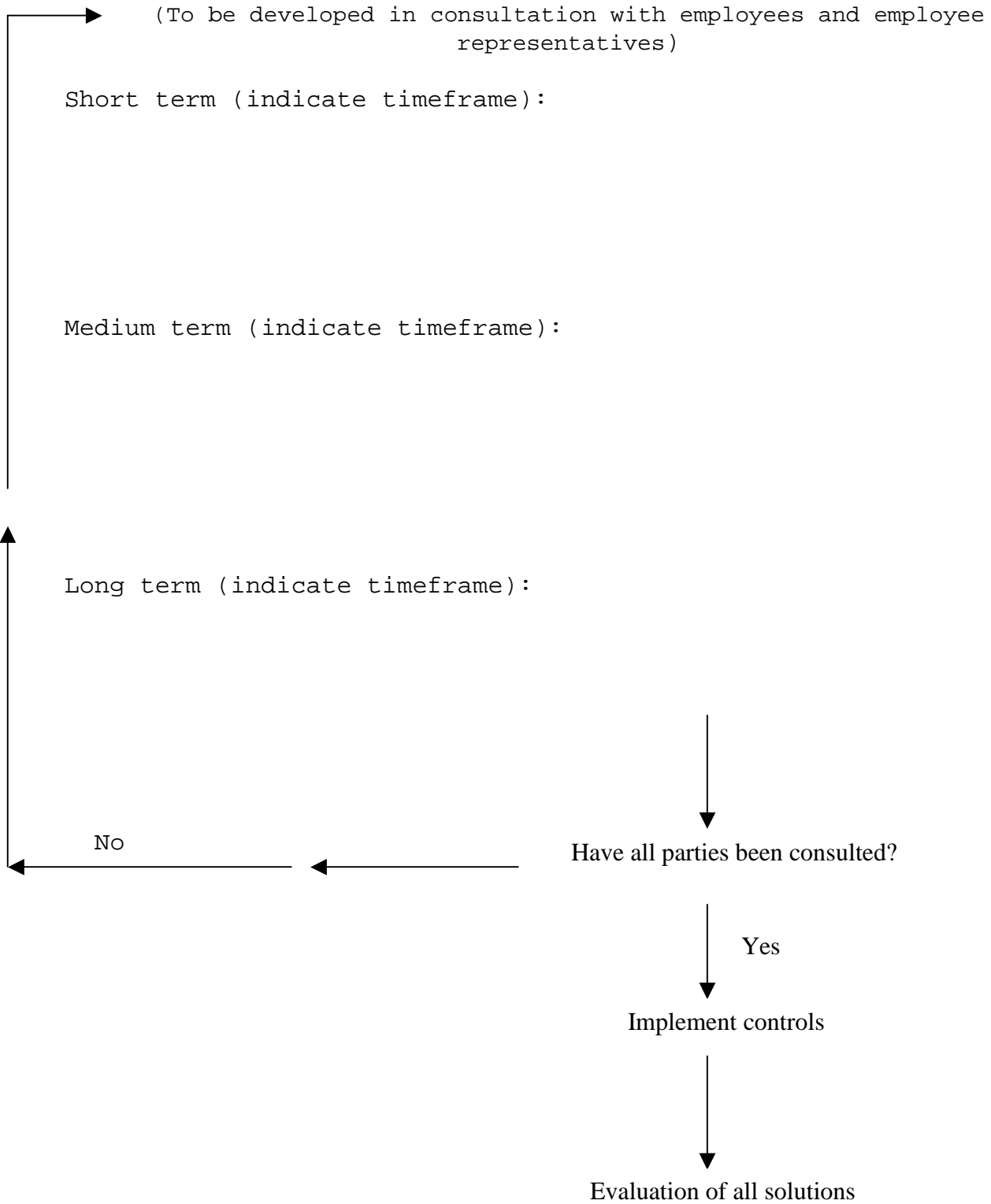
Day/Month/Year

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Risk Control

Factors assessed as risk from Risk Assessment Form.
Refer to National Code of practice for the Prevention of
Occupational Overuse Syndrome





Risk identification and risk assessment may be repeated to evaluate the appropriateness of this control measure

REFERENCED DOCUMENTS

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4. National Occupational Health and Safety Commission, Guidance Note for the Prevention of Occupational Overuse Syndrome in Keyboard Employment [NOHSC:3005 (1989)], Australian Government Publishing Service, Canberra, 1989.
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6. Standards Australia, AS 3590 Screen-based Workstations, Parts 1, 2 and 3, Sydney, 1990.
7. Worksafe Australia, Ergonomic Principles and Checklists for the Selection of Office Furniture and Equipment, Worksafe Australia, Sydney, 1991.

**MEMBERSHIP OF THE EXPERT REVIEW GROUP ON THE
NATIONAL CODE OF PRACTICE FOR THE PREVENTION
OF OCCUPATIONAL OVERUSE SYNDROME**

Members of the Expert Review Group on the National Code of Practice for the Prevention of Occupational Overuse Syndrome are listed below:

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The recommendations of the Expert Review Group were subject to review by the tripartite Standards Development Standing Committee and the National Commission, where the social, economic and technological implications of these recommendations are considered.

The provisions of this national code of practice may not necessarily reflect the views of individual members of the Expert Review Group.

The Worksafe Australia staff who provided secretariat services for this project were Mr Peter Murray, Ms Callista Bryan, Mr Greg Holloway, Ms Kym Anderson and Ms Judy Lawson.