

Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction	> What the law requires > Employers	
What the law requires		
Employers	Employers	OHS Act, s8
Employees	The legislation requires all employers to ...	
Managers and supervisors	> Ensure that the work practices, equipment used and the working environment are designed, constructed and maintained to prevent manual handling injury,	
Manufacturers and suppliers	> Undertake risk management,	
Penalties	> Consult with employees throughout the risk management process and	
Manual handling ... what are the issues	> Provide adequate information, instruction, training and supervision as may be necessary.	
Managing manual handling risk	An employer is ...	
Equipment solutions	<input checked="" type="checkbox"/> A company or registered business that employs staff, or engages contractors or on-hire labour personnel to work under their direction,	
Training	<input checked="" type="checkbox"/> An on-hire labour company [agency] that supplies labour to host companies, and	
Records	<input checked="" type="checkbox"/> Any individual who engages staff or contractors to work under their direction.	
Tools		
Additional resources		

Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction		
What the law requires	> What the law requires > Employers	
Employers	Employers	OHS Act, s8
Employees		
Managers and supervisors	The legislation requires all employers to ...	
Manufacturers and suppliers	<ul style="list-style-type: none"> > Ensure that the work practices, equipment used and the working environment are designed, constructed and maintained to prevent manual handling injury, > Undertake risk management, > Consult with employees throughout the risk management process and > Provide adequate information, instruction, training and supervision as may be necessary. 	
Penalties		
Manual handling ... what are the issues		
Managing manual handling risk	An employer is ...	
Equipment solutions	<ul style="list-style-type: none"> ☒ A company or registered business that employs staff, or engages contractors or on-hire labour personnel to work under their direction, ☒ An on-hire labour company [agency] that supplies labour to host companies, and ☒ Any individual who engages staff or contractors to work under their direction. 	
Training		
Records		
Tools		
Additional resources		



Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction		
What the law requires	> What the law requires > Employees	
Employers		
Employees	Employees	OHS Act, s20 OHS Reg, c28
Managers and supervisors	Employees, including contractors and on-hire labour staff, are required to:	
Manufacturers and suppliers	<ul style="list-style-type: none"> > Take reasonable care for the safety of others in the workplace who could be affected by what they do or fail to do [acts or omissions], and > Cooperate with the employer. 	
Penalties		
Manual handling ... what are the issues	Specifically, in relation to manual handling this can mean:	
Managing manual handling risk	<ul style="list-style-type: none"> > Comply with workplace policies and safe work practices, > Use equipment as provided, > Use specific manual handling techniques once trained, > Report any hazard, equipment fault or injury, and > Perform day to day care of equipment provided for manual handling, such as checking trolley wheels are free from debris that could impede movement. 	
Equipment solutions		
Training		
Records		
Tools		
Additional resources		



Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction		
What the law requires	> What the law requires > Managers and Supervisors	
Employers		OHS Act, s26
Employees	Managers and Supervisors	
Managers and supervisors	The OHS Act places specific responsibilities on directors and managers. The nature of these responsibilities depends on the area of control and range of influence.	
Manufacturers and suppliers	A company director or general manager may be considered to have responsibility and authority for <i>resourcing, developing, implementing and reviewing</i> work procedures. A manager may also be considered to have these responsibilities, depending on the area of control and range of influence.	
Penalties	Supervisors do not have a defined responsibility under legislation. Employers can, however, delegate some of the responsibility for OHS to a specific supervisor - this accountability must be defined clearly in their contract or duty statement, and requires the supervisor to be appropriately resourced to enable them to be accountable for specific aspects of safety in their work team e.g. control of work practices, purchasing.	
Manual handling ... what are the issues		
Managing manual handling risk		
Equipment solutions		
Training	For further information on the role of managers and supervisors, click here	
Records		
Tools		
Additional resources		



Role of managers and supervisors

The OHS Act 2000 s26 extends the corporation's responsibility for providing a safe workplace to directors and managers. The nature of these responsibilities will vary according to the level of authority and delegation prescribed or agreed in the manager's employment contract or duty statement.

Each person concerned in the management of the corporation, is taken to have contravened any provision of the OHS Act or OHS Regulation unless they can demonstrate that:

- They were not in a position to influence the conduct of the corporation in relation to the contravention or
- They used all diligence to prevent the contravention by the corporation

Nevertheless, all managers and supervisors are agents for the employer and are required to follow the policies and direction of the employer, including performing management or supervisory tasks, which should include OHS. Therefore, a manager and supervisor would be expected to:

- Ensure compliance with workplace policies and procedures
- Consult
- Respond appropriately to concerns
- Arrange or conduct risk assessments
- Implement safe work practices
- Match work, staff availability and skill mix
- Ensure appropriate equipment is available
- Ensure training is provided, including training to team leaders and more junior managers/supervisors
- Investigate manual handling hazards and incidents
- Maintain documentation
- Or ... have the work systems in place for all of the above.

Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction	> What the law requires > Penalties	
What the law requires		
Employers	Penalties	
Employees	Penalties can apply for non-compliance with the legislation. While the major penalties relate to breach of the 'duty of care' provisions, penalties also apply to non-compliance with specific sections or clauses of the legislation. While the legislation expresses penalties in <i>units</i> , with each unit currently equivalent to \$110, the following table has converted the penalty to the current dollar value.	
Managers and supervisors		
Manufacturers and suppliers		
Penalties	Employer	Up to \$ 550,000 or up to \$ 825,000 for subsequent offences
Manual handling ... what are the issues	Individual manager / director	Up to \$ 55,000 for the first offence Up to \$ 82,500 and/or Up to 2 year's jail for subsequent offences
Managing manual handling risk	Employee	Up to \$ 3,300 for first offence or Up to \$ 4,950 for subsequent offences
Equipment solutions	Manufacturer, designer and suppliers	Up to \$ 550,000 or Up to \$ 825,000 for subsequent offences
Training	Penalty notices	\$ 200 - \$ 1,500 for employers \$ 200 - \$ 600 for employees/individuals
Records	Note: Higher levels of penalty including imprisonment may apply in the event of a workplace death from 15 June 2005	
Tools		
Additional resources		

Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction		
What the law requires		
Manual handling ... what are the issues	<p>> Manual handling ... what are the issues?</p> <p>Manual handling ... what are the issues?</p> <p>Manual handling is when a person uses their body, specifically the musculoskeletal system, to perform manual work. This work, called a manual task, can include:</p> <ul style="list-style-type: none"> > Lifting, lowering, pushing, pulling, carrying or moving any load, > Holding or restraining any load, > Repetitive movements, > Sustained work postures, and > Exposure to vibration. 	<p>Everyone performs some manual tasks as part of their work, but it is the hazardous activities that potentially cause injury. While the low back, shoulder and wrist are the most common areas for injury, injury can occur to any part of the musculoskeletal system, including:</p> <ul style="list-style-type: none"> > Sprains and strains to muscles, ligaments and tendons e.g. rotator cuff, epicondylitis, low back strain, > Damage to the intervertebral discs e.g. perforated disc, disc protrusion, > Nerve damage i.e. neuropathies, carpal tunnel syndrome, > Bone injuries e.g. fractures, deformations, > Low back disorders resulting from whole body vibration, > Muscular and vascular disorders associated with hand-arm vibration, and > Soft tissue hernias e.g. indirect inguinal hernia.
What causes injury ...		
Managing manual handling risk		
Equipment solutions		
Training		
Records		
Tools		
Additional resources		



Manual Handling Resource Kit



Foreword

About Us

Contact Us

Introduction

What the law requires

Manual handling ... what are the issues

Managing manual handling risk

Who needs to be involved

Hazard identification

Assess the risk

Controlling the risk

Equipment solutions

Training

Records

Tools

Additional resources

> Managing manual handling risk ...



Managing manual handling risk ...

The process for managing manual handling risk requires a systematic approach to:


- > *Identify* the manual tasks that are hazardous,
- > *Assess* the tasks to determine the nature of the risk,
- > *Eliminate* the aspects of the task that place employees at risk, or
- > If elimination is not reasonably practicable, control the risk.

This is known as risk management.



Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction	> Managing manual handling risk > Who needs to be involved ...	
What the law requires		
Manual handling ... what are the issues	Who needs to be involved ...	
Managing manual handling risk	Because the process of risk management is likely to bring about some change to the way work is done in the workplace, it is important for management and employees to work together throughout the process to find workable solutions.	
Who needs to be involved	Just who gets involved will depend on the size of the organisation, the team/s directly affected by the hazardous manual task, any shift considerations, and the complexity of the issue being assessed.	
Hazard identification.	For small workplaces, risk management will need to involve employees and supervisors of any teams / areas affected – this may mean everyone.	
Assess the risk	For larger workplaces, there are usually more personnel with an interest in the issue. It may be necessary to involve any or all of the following people at some stage in the risk assessment process:	
Controlling the risk	<ul style="list-style-type: none"> > Members of any teams / areas affected, > Team supervisor and manager, > OHS representatives such as HSRS or OHS committee members, > Production engineer, > Maintenance personnel, > Personnel from information technology, > Quality manager, > Personnel from sales, > Personnel from purchasing, > Contractor / labour-hire liaison, if necessary, and > OHS personnel. 	
Equipment solutions	If someone has already been injured from a manual task, their experience can provide important input into the Risk Management process.	
Training	For some complex manual tasks, or where significant change is anticipated, it may be necessary to engage an OHS professional with specific skill in addressing manual handling issues. For information on the types of OHS professionals that can help, click here.	
Records		
Tools		
Additional resources		

Manual Handling Resource Kit



<p>Foreword</p> <p>Introduction</p> <p>What the law requires</p> <p>Manual handling ... what are the issues</p> <p>Managing manual handling risk</p> <p style="padding-left: 20px;">Who needs to be involved</p> <p style="padding-left: 20px;">Hazard identification</p> <p style="padding-left: 20px;">Assess the risk</p> <p style="padding-left: 20px;">Controlling the risk</p> <p>Equipment solutions</p> <p>Training</p> <p>Records</p> <p>Tools</p> <p>Additional resources</p>	<p>About Us</p> <p>Contact Us</p> <p>> Managing manual handling risk > Hazard Identification ...</p> <p>Hazard Identification ...</p> <p>Hazard identification is the first step – it helps pinpoint the tasks that are likely to be problems. It should involve:</p> <ul style="list-style-type: none"> > Consulting with employees about their concerns, > Reviewing in-house documents such as hazard reports, incident reports, production logs, equipment breakdown / maintenance logs, and > Researching industry sources, such as industry bulletins. <p>Key indicators that a manual task is hazardous include:</p> <ul style="list-style-type: none"> > Tasks that cause pain, discomfort, numbness or stiffness, > Tasks that are difficult to do, > Tasks that require more than one person to do, > Tasks that employees like doing the least, and > Any task that has resulted in a manual handling injury. <p>Click here for a tool to assist in identifying hazards.</p>	<p></p>
---	--	---------



Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction	> Managing manual handling risk > Assess the risk ...	
What the law requires		
Manual handling ... what are the issues	Assess the risk ...	
Managing manual handling risk	Risk assessment involves determining the specific aspects of a hazardous task that are the problem so that appropriate controls can be selected.	
Who needs to be involved	The best approach is to get the team together and look at the task being performed under normal conditions, specifically:	
Hazard identification	<ul style="list-style-type: none"> > The discrete aspects of the tasks, > Work practices, > Skills and experience of the employees, > Tools and equipment used, > Clothing worn, including PPE as this can impede posture, grip and movement, > The layout of the work area and relationship to associated activities e.g. how far loads are moved, single surface flooring or steps / ladders, and > The environment e.g. hot, humid, low illumination, exposure to concurrent hazards such as chemicals or noise. 	
Assess the risk		
Controlling the risk		
Equipment solutions		
Training		
Records	Next, consider the variables:	
Tools	<ul style="list-style-type: none"> > The people who do the same task – it is best to observe at least a few people as individual factors can influence how the work is performed e.g. skill level, pace of work, reach capability, body size and shape, and whether the employee wears prescription glasses, > Whether the work is affected by peaks and troughs, bottlenecks, frequent stoppages or equipment breakdown, and > For shiftwork, whether there is any difference in the way work is performed over the various shifts e.g. less supervision on night shift, more dispatches on afternoon shift. 	
Additional resources		



Useful tips include...

- * Using a stills or video camera.
- * Using a standard tool or worksheet.

Now, consider the following in relation to the specific aspects of the hazardous task:

Adverse Postures

- > Bending the back or head forwards or sideways – more than 20°,
- > Twisting the back or head – more than 20°,
- > Backward bending of the back or head,
- > Working with one or both hands above shoulder height,
- > Working with one or both hands below mid thigh height,
- > Reaching out in any direction, with the arm fully extended,
- > Working with one or both upper arms away from the body,
- > Working with shoulders raised,
- > Bending of the wrist,
- > Squatting, kneeling, lying, semi-lying and sitting, and
- > Standing with the majority of weight supported on one leg e.g. operating a pedal.

Adverse forces

- > Lifting, lowering or carrying loads,
- > Pushing, pulling or dragging loads,
- > Gripping an object,
- > Exerting a force with one hand only,
- > Carrying a load on one side of the body, and
- > Moving loads while seated,

Adverse Actions

- > Very fast movements of the arms and/or hand or leg and/or foot, excluding walking,
- > Working with the fingers held together or wide apart,
- > Rotation or twisting of the arms or wringing of the hands,
- > Applying sudden or unexpected forces,

- > Holding, supporting or restraining any person, animal, object or tool,
- > Performing two opposing actions simultaneously e.g. supporting or restraining a load while reaching or bending to obtain another object, and
- > Throwing, catching, jumping, kicking, or kneading movements.

Duration and Frequency

- > Any of the adverse postures or actions done more than twice in a 60 second period,
- > Any of the adverse postures or actions held for more than 30 seconds at a time,
- > Any single task done for more than 1 hour without a break, and
- > Whether work routinely exceeds 8 hours.

Vibration

- > Exposure to sustained whole-body vibration e.g. forklifts, working on a machine while the motor is on, and
- > Exposure to sustained hand-arm vibration e.g. powered hand tools.

Now, consider the *nature of the load* being handled ...

Characteristics	Factors that increase risk
Load dimensions	Large and bulky e.g. cartons too large to be carried or require arms to be held away from the body. Long and narrow e.g. boxes, cartons, umbrellas or projections - create
Heavy loads	As the weight increases, so do the forces (muscles)
Grip	It can increase the forces required to control the load
Stability of balance	Unstable loads (usually present in boxes, cartons, etc.)
Loads that move	Loads or poorly packed loads can cause a shift during movement and this results in adverse postures. Unpredictable loads (e.g. falling objects and furniture) often result in adverse postures or injuries due to uncontrolled movement
Unpredictable loads	Controlled and predictable movement is essential for safe manual handling. Unpredictable loads can result in adverse postures or injuries due to uncontrolled movement

Click below for tools to assist in assessing hazardous tasks.

- Risk Assessment Form
- Risk Assessment Short Version
- Materials Handling Equipment Assessment Checklist

I've been told that we cannot handle loads heavier than 16 kg. Is this correct?

There are no load limits prescribed by current legislation because weight is only ONE factor that should be considered when reviewing manual work.

16 kg is often cited as a recommended limit because it was prescribed in legislation prior to 1991, however then it only applied to women and children. There was never any limit for males.

Research has shown that as loads increase in weight, fewer people are capable of safe handling and need longer to recover between handling loads. So, as a general guide, loads should be kept as low as possible.

While 16 kg is still a good benchmark to aim for, lighter loads may be even better, particularly if the task is repetitive, the load is awkward to handle, or you employ young or mature workers. Certainly, no worker should ever be required to handle alone a load weighing in excess of 55 kg - this is very unsafe.

If you are a supplier, you will also need to consider your customers too. It is not unusual for customers to specify the maximum weight of loads for products sold to them; however the limit should never be more than you have assessed as safe for your workers to handle without equipment.

Manual Handling Resource Kit



Foreword

Introduction

What the law requires

Manual handling ... what are the issues

Managing manual handling risk

Who needs to be involved

Hazard identification

Assess the risk

Controlling the risk

Equipment solutions

Training

Records

Tools

Additional resources

About Us

Contact Us

> Managing manual handling risk > Controlling the risk ...



Controlling the risk ...

If the assessment confirms any risk factors, then this provides the focus for elimination or control.

First, consider whether it is possible to eliminate the task or the component that was assessed as a risk. This usually involves automation or using equipment to eliminate handling tasks, but it could be as simple as changing the height of a workbench so that an employee is not stooped.

If it is not possible to eliminate the risk, then other steps need to be taken to minimise the risks, including:

- > Changing the workplace layout e.g. redesigning to reduce load carrying, modifying storage so loads are manually handled between mid thigh and shoulder height,
- > Introducing equipment to reduce handling e.g. pallet lifters, drum handling,
- > Changing the packaging or container size, either reducing it to reduce the load for manual handling, or increasing it and restrict movement to equipment, providing visible loads on containers,
- > Changing the environment to reduce heat, cold, wind or vibration,
- > Changing the way work is done e.g. adjusting staff levels to match production, improving despatch times, improving stock control, and
- > Improving plant and equipment maintenance to facilitate the smooth flow of product.

For heavy loads, team handling, has traditionally been considered a solution. However, injury statistics consistently demonstrate that team handling is risky. Therefore, equipment should be used in preference to team handling. Where it cannot be avoided, team handling should not be the only control strategy employed.

Control strategies need to be backed up with work procedures, staff training and supervision.

Sometimes these changes take some time to put in place, so interim solutions may be required, such as outsourcing, equipment hire, temporary staff adjustments and modified work procedures.

REMEMBER ... effective control often involves a combination of strategies and requires revisiting periodically to ensure that any strategies implemented are workable and effective.

We are introducing new work procedures. In the past, we have found some employees remain resistive to change. How can this be overcome?

People react in a variety of ways to change. Some embrace it, the majority go along for the ride, others need a lot of encouragement and the remainder are totally resistive.

According to Cole*, effective change requires ...

1. Sound preparation,
2. Create a common vision,
3. Clear communication,
4. Concerns are addressed and enable participation,
5. Clear action plan,
6. Celebrate progress,
7. Create a climate of certainty, and
8. Follow-up.

However, for those few employees who remain resistive, despite efforts to address any concerns, management need to provide a formal direction, increase supervision in the workplace and deal with any non-compliance under usual procedures.

* Cole, K, Supervision: The Theory and Practice of First-Line Management, Prentice Hall, Sydney, 2nd Edition, 2001

Personnel protective equipment

It is important to note ... there is no personal protective equipment (PPE) that reduces the direct impact of load handling on the body or protects a worker against manual handling risk while performing a hazardous manual task.

However, employees often have to wear PPE while doing manual handling because of *other risks* in the environment. Remember, that PPE, and indeed other aids such as prescription lenses, can adversely impact on manual tasks by:

- Altering grip - gloves reduce the tactile ability in the hands,
- Limiting foot flexion - rigid soled safety shoes will prevent the foot from flexing, making it difficult to pick up loads from low levels,
- Restricting peripheral vision - goggles and safety eyewear, and
- Altering head position to see screens / controls / labels on shelves – prescription lenses.

A company I visited overseas supplies backbelts to all their manual workers. Do these work?

Back belts are usually an elasticised band, fitted securely around the waist to support the lumbar spine during manual tasks.

In 1994, the US National Institute for Occupational Safety and Health, NIOSH, conducted a review of back belts. While they acknowledge that back belts can be used effectively in rehabilitation, under the care of the treating provider, the study concluded that back belts...

1. Do not reduce the forces acting on the lumbar spine.
2. Do not reduce strain to muscles, tendons or ligaments.
3. Do not reduce fatigue from manual work.
4. Do not increase the ability to lift, although the worker may feel confident in lifting more than they are capable of handling because of the belt.
5. Do not reduce the risk of injury, nor do they reduce back pain.
6. However, they do increase blood pressure and increase pressure on the abdominal muscles, which may increase susceptibility to hernia.

For the above reasons, back belts are not recommended for workers engaged in manual tasks.

Our business is planning on introducing a new process, which will involve new machinery and redesigning the workplace layout. What's the best approach to ensure we implement this safely?

When planning for change, it is best to establish a project team right from the outset to assist in the decision making. Any team should involve employees who will either be working with the new plant or supervising others using the plant.

It is best for the team to observe the plant in use at another workplace, specifically:

- Review specifications,
- Review operating conditions,
- Consider the design and layout of the host workplace,
- Review work procedures,
- Observe the way work is performed, postures, actions, behaviours, work flow and ancillary equipment,
- Where possible, meet with the users, including maintenance / service personnel, and
- Review the training that was required to skill the operators.

If you have a choice in suppliers, you may need to replicate this process at other facilities to see which technology and work processes are best suited to your needs,

If possible, trial the plant and associated equipment in your workplace.

Once you have made the decision, the project shifts to planning for incorporating the plant into your workplace. This includes:

- Keep employees informed and the team involved,
- Plan the space,
- Plan to keep producing while the change is implemented,
- Prepare interim operating procedures,
- Plan lead time for developing and training key personnel,
- Plan for additional waste removal, and
- Plan for additional supervision.

All plans will need some tweaking – allow flexibility and expect delays.

Once installed and operating, conduct a post installation review and modify controls as required. Ensure that the process has not introduced other risks.

Manual Handling Resource Kit



Foreword

About Us

Contact Us

Introduction

What the law requires

Manual handling ... what are the issues

Managing manual handling risk

Equipment solutions

Moving loads on level surfaces

Moving loads vertically

Moving loads between levels

Loading/Unloading pallets

Handling reels

Handling drums

Loading to/unloading from bins and stillages

Order picking

Pallet wrapping

Miscellaneous ... a range of equipment not included elsewhere

Training

Records

Tools

Additional resources

> Equipment solutions > Moving loads on level surfaces



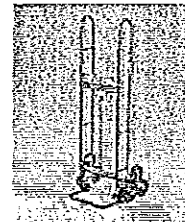
Equipment solutions

Moving loads on level surfaces

Why it's a problem

- > Distance
- > Forces required
- > Load dimensions
- > Low loads, awkward postures

Three-wheeled trolley - manual



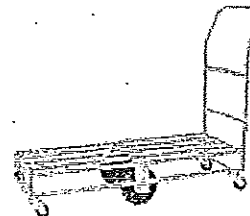
Scissor-lift trolley



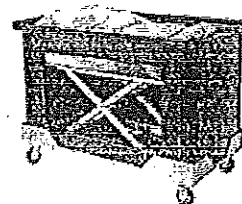
Convertible hand truck



Freight trolley



Tub trolley with height adjustable bin insert



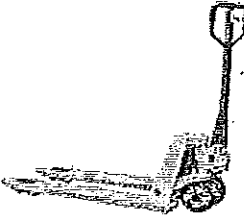
Nested cage trolley



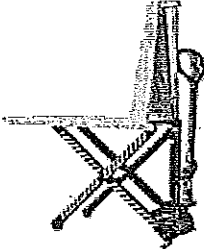
Load skates - with steering rod for manoeuvring heavy loads / machinery into place



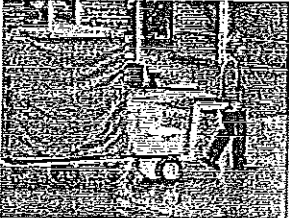
Pallet jack



Scissor lift pallet jack



Tug



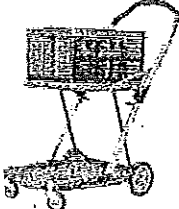
Multi-purpose - forklift, platform lift and floor crane



Clean-room platform trolley
e.g. moving servers



Office trolley



Manual Handling Resource Kit



Foreword

About Us

Contact Us

Introduction

What the law requires

Manual handling ... what are the issues

Managing manual handling risk

Equipment solutions

Moving loads on level surfaces

Moving loads vertically

Moving loads between levels

Loading/Unloading pallets

Handling reels

Handling drums

Loading to/unloading from bins and stillages

Order picking

Pallet wrapping

Miscellaneous ... a range of equipment not included elsewhere

Training

Records

Tools

Additional resources

> Equipment solutions > Moving loads vertically



Equipment solutions

Moving loads vertically

Why it's a problem

- > Forces required
- > Size
- > Load stability
- > Height through which load is moved
- > Overhead heights

Scissor-lift trolley



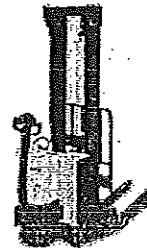
Forklift



Reach truck



Walkie-stacker



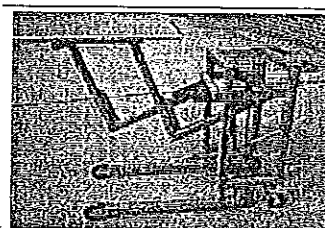
Multi-purpose - forklift, platform lift and floor crane



Clean-room platform trolley



Platform lift



Floor crane



Holster



Long loads



Manual Handling Resource Kit



Foreword

About Us

Contact Us

Introduction

> Equipment solutions > Loading / Unloading pallets



What the law requires

Manual handling ... what are the issues

Managing manual handling risk

Equipment solutions

Moving loads on level surfaces

Moving loads vertically

Moving loads between levels

Loading/Unloading pallets

Handling reels

Handling drums

Loading to/unloading from bins and stillages

Order picking

Pallet wrapping

Miscellaneous ... a range of equipment not included elsewhere

Training

Records

Tools

Additional resources

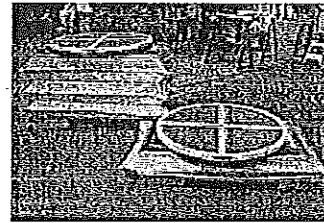
Equipment solutions

Loading / unloading pallets

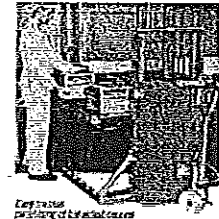
Why it's a problem

- > Loading to and from pallets is done at varying heights from ground level
- > Workplace layout may limit access to half the pallet
- > Characteristics of the load being handled – size, dimensions, load, stability, shape
- > Frequency of load handling

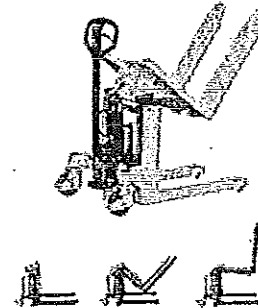
Rotating pallet lifter with bellows skirt



Auto stacker



Mobile lifter



Vacuum lifter



Manual Handling Resource Kit



Foreword

About Us

Contact Us

Introduction

What the law requires

Manual handling ... what are the issues

Managing manual handling risk

Equipment solutions

Moving loads on level surfaces

Moving loads vertically

Moving loads between levels

Loading/Unloading pallets

Handling reels

Handling drums

Loading to/unloading from bins and stillages

Order picking

Pallet wrapping

Miscellaneous ... a range of equipment not included elsewhere

Training

Records

Tools

Additional resources

> Equipment solutions > Handling drums



Equipment solutions

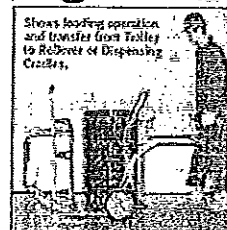
Handling drums

Why it's a problem

- > 200 L drums require high force to move
- > Decanting is uncontrolled without equipment – potential for spill



Drum trolley with drum cradle



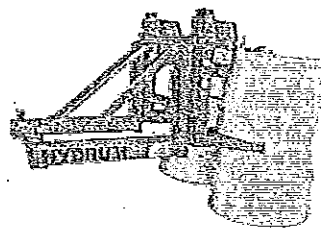
Lift and tip



Palletising drum lifter



Forklift drum attachment



[Acknowledgements](#) | [Copyright Notice & Disclaimer](#) | [Contact Us](#)

Manual Handling Resource Kit



Foreword

About Us

Contact Us

Introduction

What the law requires

Manual handling ... what are the issues

Managing manual handling risk

Equipment solutions

Moving loads on level surfaces

Moving loads vertically

Moving loads between levels

Loading/Unloading pallets

Handling reels

Handling drums

Loading to/unloading from bins and stillages

Order picking

Pallet wrapping

Miscellaneous ... a range of equipment not included elsewhere

Training

Records

Tools

Additional resources

> Equipment solutions > Loading to / unloading from bins and stillages



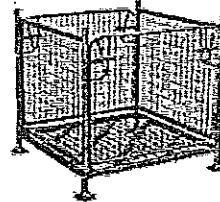
Equipment solutions

Loading to / Unloading from Bins / Stillages

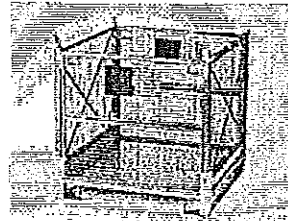
Why it's a problem

- > Low and deep loads
- > Full squat / lunge to access loads
- > Twisting to access deep into stillage
- > Frequent access
- > Stillages often stored under racking

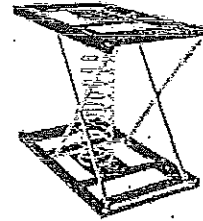
Stillage with two removable side for access



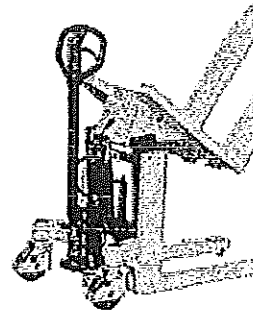
Fully collapsible stillage with half height gates



Height adjustable bin insert



Bin / stillage tilter



Key principles for handling loads

1st principle .. can handling be eliminated, is it necessary to handle the load at all

2nd principle .. can equipment be used to make handling easier

3rd principle .. if equipment isn't possible, or the load has to be manoeuvred with the equipment, then ...

Lifting

- Know your own limits
- Maintain balance – stable stance / legs apart
- Keep the load close to the body during movement
- Avoid twisting your back or neck
- Keep movements smooth
- Look in the direction of travel
- If lifting from below mid thigh height, lunge or squat for weight transfer

Pushing / Pulling

- Keep wrists in a neutral position when pulling, pushing or steering
- Avoid locking elbows when pushing, pulling or steering
- Steer using body weight rather than arms – this action avoids twisting
- Keep movements smooth
- Look in the direction of travel-stop and turn to look behind

Team Handling

- Talk through what you are going to do before you get into position
- Ensure you have sufficient people
- Ensure you discuss the movement command i.e. move on '3'
- Ensure pathway is clear - if one person has to walk backwards for any part of the handling, ensure this area is free of any obstruction
- Follow above guides for lifting and pushing/pulling

4th principle .. debrief after handling, could anything have been done better

Toolbox topics

Toolbox talks are short training sessions, usually no longer than an hour. They are conducted in the workplace, and usually involve a team or small group from one work area. While induction is not strictly a topic for toolbox talks, an outline is included here to show how it fits with future topics.

<p>Induction <i>should include</i></p>	<ul style="list-style-type: none"> • Introduction to OHS legislation • Responsibilities • Workplace OHS arrangements <ul style="list-style-type: none"> - Consultation - Work procedures - Reporting hazards and injuries - Supervisors - OHS personnel
<p>Introduction to manual handling <i>should include</i></p>	<ul style="list-style-type: none"> • Identifying manual handling hazards • Risk factors • Approaches to eliminating or controlling risk from manual tasks
<p>Safe handling <i>should include</i></p>	<ul style="list-style-type: none"> • Key principles for handling any load • Specific handling situations relevant to the work group e.g. palletising, accessing stock in storage
<p>Risk Management <i>should include</i></p>	<ul style="list-style-type: none"> • Work through a workplace issue – why it is a problem, risk factors present and determine what should be done • Prepare a Work Procedure
<p>Contribute to Risk Assessment – Task <i>should include</i></p>	<ul style="list-style-type: none"> • Overview of the assessment tool • Role of the team • Undertake an assessment of a simple task • Document and report
<p>Contribute to Risk Assessment – Equipment <i>should include</i></p>	<ul style="list-style-type: none"> • Undertake an assessment of a item of equipment, such as a trolley • Document and report
<p>Team Leader <i>should include</i></p>	<ul style="list-style-type: none"> • Leading risk assessment • Facilitating change • Preparing job safety analysis and safe work methods statements • Investigating incidents, and • Performance management

Manual Handling Resource Kit



Foreword	About Us	Contact Us
Introduction	> Records	
What the law requires		
Manual handling ... what are the issues	Records	
Managing manual handling risk	<i>How long do I need to keep records for manual handling?</i>	
Equipment solutions	Any documentation pertaining to OHS should be kept for a minimum of 5 years.	
Training		
Records	Specifically, in relation to manual handling the following should be retained:	
Tools	<ul style="list-style-type: none"> > Evidence of what work was like before changes were made e.g. photographs, video, plans, plant specifications, > Evidence of what work was like after changes, > Workplace layouts / floorplans, > Hazard and maintenance logs, > Tools and checklists used for risk management, including the names of people consulted, > Work procedures, > Records of training provided to employees ... by whom, when, who attended, program outline, handouts provided, > Incident reports, > Minutes of meetings where manual handling was discussed, diary entries, and > Any written instruction or staff bulletin / notice. 	
Additional resources		



ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Assessment details

Location of task:	
Description of manual task:	
Date of assessment:	

Persons doing assessment:

Work area management rep:	
Work area H&S rep:	
Others (employees, consultants):	

Reason for identification:

<input type="checkbox"/> Existing task	<input type="checkbox"/> Change in task, object or tool	<input type="checkbox"/> Report of musculoskeletal disorder (MSD)
<input type="checkbox"/> New task	<input type="checkbox"/> New information	<input type="checkbox"/> Change in the workplace/ work environment

The *National Standard for Manual Tasks (2007)* requires duty holders to assess the risk of any hazardous manual tasks found in the workplace and put effective measures in place to:

- > prevent injury by eliminating the risk
- > where elimination is not reasonably practicable, reduce the risk of injury as far as is reasonably practicable

How to use this worksheet

Follow the worksheet step by step and refer to the *National Code of Practice for the Prevention of Musculoskeletal Disorders from Performing Manual Tasks at Work (2007)* (COP) as indicated on the worksheet to:

- > assess tasks in the workplace involving hazardous manual tasks – **Refer to COP Section 6.3**
- > determine the sources of risk – **Refer to COP Section 6.3**
- > list appropriate risk control measures – **Refer to COP Section 6.4**
- > implement those measures – **Refer COP to Section 6.4**

You are required to consult with the relevant health and safety representatives and, where possible, also involve the employees who do the tasks, when assessing the tasks and planning and introducing risk controls.

This worksheet and the Code of Practice can be downloaded from the ASCC website at www.ascc.gov.au

Record your assessment! – It is recommended that you retain your risk assessment if it shows a risk of injury.

Control any risk! – This worksheet provides general guidelines only. Some workers may still be at risk of injury because manual handling occurs in a variety of tasks and workplace situations, and injury may be caused by a number of factors. It is important, as far as is reasonably practicable, to control any risk you find.

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Question 1 – Does the task involve repetitive or sustained postures, movements or forces?

Tick **yes** if the task requires any of the following actions to be done

- > repetitively (done more than twice a minute) OR
- > sustained (done for more than 30 seconds at a time)

Postures and movements	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
Bending the back forwards or sideways more than 20 degrees	<input type="checkbox"/>	41	
Twisting the back more than 20 degrees	<input type="checkbox"/>	41	
Any visible backward bending	<input type="checkbox"/>	41	
Bending the head forwards or sideways more than 20 degrees	<input type="checkbox"/>	41	
Any visible bending of the head backwards	<input type="checkbox"/>	41	
Twisting the neck more than 20 degrees	<input type="checkbox"/>	41	
Working with one or both hands above shoulder height	<input type="checkbox"/>	41	
Reaching forwards or sideways more than 30 cm from the body	<input type="checkbox"/>	41	
Reaching behind the body	<input type="checkbox"/>	41	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Postures and movements	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
Squatting, kneeling, crawling, lying, semi-lying or jumping	<input type="checkbox"/>	41	
Standing with most of the body's weight on one leg	<input type="checkbox"/>	41	
Twisting, turning, grabbing, picking or wringing actions with the fingers, hands or arms	<input type="checkbox"/>	41	
Working with the fingers close together or wide apart	<input type="checkbox"/>	41	
Very fast movements	<input type="checkbox"/>	41	
Bending of the wrist beyond the angle indicated on page 40 of the Code of Practice	<input type="checkbox"/>	41	
Forces			
Lifting, lowering or carrying	<input type="checkbox"/>	43	
Carrying with one hand or one side of the body	<input type="checkbox"/>	43	
Exerting force with one hand or one side of the body	<input type="checkbox"/>	43	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Forces	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
Pushing, pulling or dragging	<input type="checkbox"/>	43	
Gripping with the fingers pinched together or held wide apart	<input type="checkbox"/>	43	
Using a finger grip, pinch grip, or an open handed grip to handle a load	<input type="checkbox"/>	43	
Exerting force while in an awkward posture, for example, supporting items while arms or shoulders are in an awkward posture, or moving items while legs are in an awkward posture	<input type="checkbox"/>	43	
Holding, supporting or restraining any object, person, animal or tool	<input type="checkbox"/>	43	

Question 2 – Does the task involve long duration?

Tick **yes** if the task is done for:

	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
More than 2 hours over a whole shift, OR Continually for more than 60 minutes at a time	<input type="checkbox"/>	43	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Question 3 – Does the task involve high force?

Tick yes if the task involves any high force actions

High forces	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
Lifting, lowering or carrying heavy loads	<input type="checkbox"/>	45	
Pushing or pulling objects that are hard to move or are hard to stop (e.g. a trolley)	<input type="checkbox"/>	45	
Using a finger-grip, a pinch-grip or an open-handed grip to handle a heavy or large load	<input type="checkbox"/>	45	
Exerting force at the limit of the grip span	<input type="checkbox"/>	45	
Needing to use two hands to operate a tool designed for one hand	<input type="checkbox"/>	45	
Holding, supporting or restraining a person, animal or heavy object	<input type="checkbox"/>	45	
Exerting force with the non-preferred hand	<input type="checkbox"/>	45	
Two or more people need to be assigned to handle a heavy or bulky load	<input type="checkbox"/>	45	
During the application of high force, the body is in a bent, twisted or otherwise awkward posture	<input type="checkbox"/>	45	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

High forces	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
Applying force suddenly in response to unexpected forces (for example, when an animal suddenly moves)	<input type="checkbox"/>	45	
Hitting or kicking	<input type="checkbox"/>	45	
Holding, supporting or restraining a person or animal likely to move unexpectedly	<input type="checkbox"/>	45	
Throwing or catching	<input type="checkbox"/>	45	
Jumping while holding a load	<input type="checkbox"/>	45	

Tick **yes** if workers report any of the following about the task

The task can only be done for short periods	<input type="checkbox"/>	46	
Pain or significant discomfort during or after the task	<input type="checkbox"/>	46	
Stronger workers are assigned to do the task	<input type="checkbox"/>	46	
Workers think the task should be done by more than one person, or seek help to do the task	<input type="checkbox"/>	46	
Workers say the task is physically very strenuous or difficult to do	<input type="checkbox"/>	46	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Question 4 – Is there a risk?

Does the task involve repetitive or sustained postures, movements or forces, AND long duration?

Tick yes if you ticked any boxes in Question 1 AND Question 2 The task is a risk. Risk control is required.

Does the task involve high force?

Tick yes if you ticked any box in Question 3 The task is a risk. Risk control is required.

Question 5 – Are aspects of the work environment or the way work is organised increasing the risk?

Tick yes if the task involves:

Vibration	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk ?)
Hand-arm vibration	<input type="checkbox"/>	48	
Whole-body vibration	<input type="checkbox"/>	48	
Thermal environment			
Low temperatures (for example, in cool rooms, cold stores, or working outside in cold weather)	<input type="checkbox"/>	49	
Wearing thick clothing that restricts movement while working in cold conditions (e.g. gloves)	<input type="checkbox"/>	49	
Handling very cold or frozen objects	<input type="checkbox"/>	49	
High air temperatures (for example, in foundries, laundries, kitchens, manufacturing processes which generate heat, or working outside in hot weather)	<input type="checkbox"/>	49	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Thermal environment	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
Radiant heat (for example, from the sun, or from processes such as smelting or plastics extrusion)	<input type="checkbox"/>	49	
Wearing heavy protective clothing while working in hot conditions	<input type="checkbox"/>	49	
Workers are working in hot conditions and they are not used to it	<input type="checkbox"/>	49	
High humidity caused by the weather or processes such as steam cleaning	<input type="checkbox"/>	49	
Windy conditions, combined with hot or cold weather	<input type="checkbox"/>	49	
Handling large objects in windy conditions	<input type="checkbox"/>	49	
Wind chill caused by exposure to wind in low temperatures	<input type="checkbox"/>	49	
Work organisation and work practices			
The work rate is set by a machine or the team are not under the worker's control	<input type="checkbox"/>	50	
Systems of work, such as piecework, that encourage workers to skip breaks to finish early, or to produce more items in the set time.	<input type="checkbox"/>	50	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Work organisation and work practices	Yes	Page	Comments (ie. when and where is it happening? What is causing it – what is/are the source(s) of the risk?)
Levels of work demand that workers find difficult to keep up with (pace)	<input type="checkbox"/>	50	
Sustained high levels of attention and concentration	<input type="checkbox"/>	50	
Systems of work that offers the worker little or no control over the way they do their work	<input type="checkbox"/>	50	
Workers frequently needing to meet tight deadlines	<input type="checkbox"/>	50	
Sudden changes in workload, or seasonal changes in volume without any mechanisms for dealing with the change	<input type="checkbox"/>	50	
Levels of physical work demand that workers find difficult to maintain (effort)	<input type="checkbox"/>	50	

Tick **yes** if workers:

Feel that guidance and resources provided by their supervisors or co-workers should be increased so that they can perform their work to the required standard	<input type="checkbox"/>	50	
Feel that they have not been given sufficient training and information by their employers in order to carry out their job successfully	<input type="checkbox"/>	50	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Has there been a report of MSD associated with this task?

The report of MSD associated with the task usually means increased risk so implementing risk controls should be a high priority.

Tick **yes** if any reports of MSD have been made

Provide comments here. It may be helpful to sketch the task or attach a photograph, and describe the task or area more fully.

If you found any risk of MSD, you must control it as far as is reasonably practicable.

Generally, the more boxes you ticked in each section on this worksheet, the greater the risk.

If the assessment shows a risk of MSD, you should keep this record until the task is no longer done or if the task is changed and another assessment is done.

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Risk Control

Any risk of MSD must be eliminated or controlled as far as reasonably practicable.

Refer COP Section 6.4 for detailed guidance on ways to control risk of MSD. The report of a MSD associated with the task usually means increased risk so implementing risk controls should be a high priority.

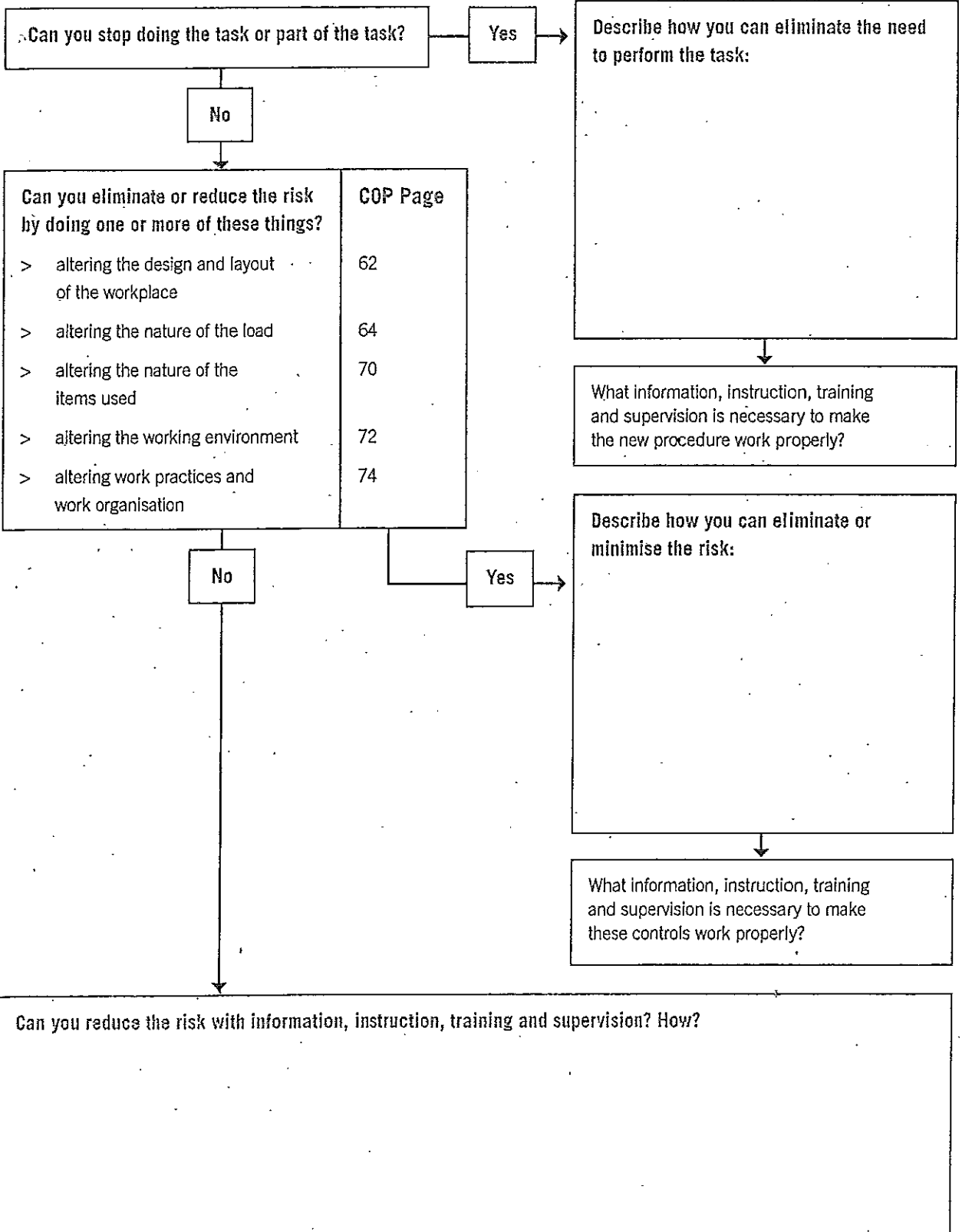
Task:	
Date:	
Persons considering controls	
Work area management rep	
Work area H&S rep:	
Others (employees, consultants):	
What are the sources of risk?	
What needs to be fixed to eliminate or reduce the risk for each factor ticked in Question 1, 2, 3 and 5?	

ASSESSING & CONTROLLING RISKS FROM MANUAL TASKS

Risk Control

How are you going to fix the problems?

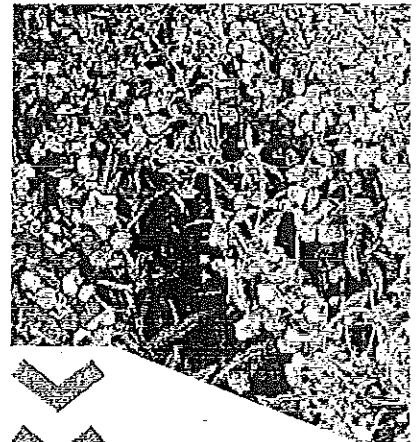
You may need to use a combination of risk controls to eliminate or minimise the risk as far as reasonably practicable.



NATIONAL STANDARD FOR MANUAL TASKS

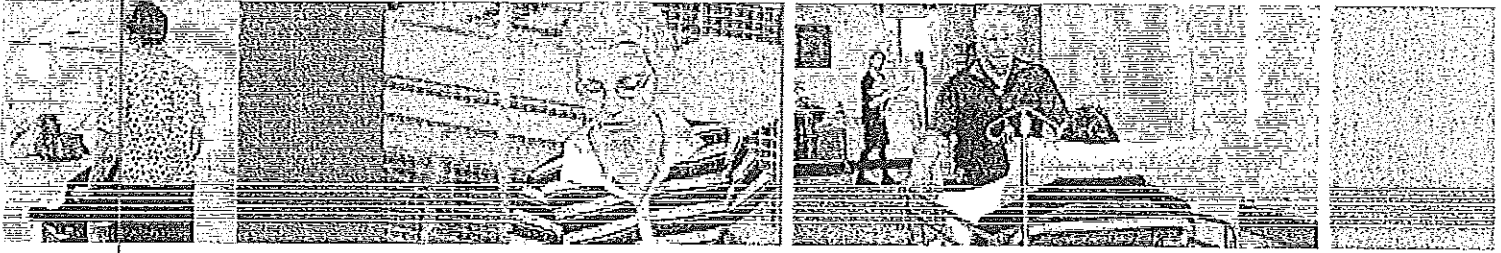


CANBERRA
AUGUST 2007



Australian Government
Australian Safety and Compensation Council





© Commonwealth of Australia 2006

First published:

ISBN 0 642 32673 8 (print)

ISBN 0 642 32679 7 (online)

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. Apart from any use as permitted under the Copyright Act 1968, all other rights are reserved. Requests for further authorisation should be directed to the Commonwealth Copyright Administration, Attorney General's Department, Robert Garran Offices, National Circuit, Canberra, ACT 2600, or posted to commonwealth.copyright@ag.gov.au



Foreword

The Australian Safety and Compensation Council (ASCC) leads and coordinates national efforts to prevent workplace deaths, injury and disease in Australia.

Through the quality and relevance of the information it provides, ASCC seeks to influence the awareness and activities of every person and organisation with a role in improving Australia's occupational health and safety (OHS) performance.

More specifically, ASCC aims to:

- > support and enhance the efforts of the Australian, state and territory governments to improve the prevention of workplace deaths, injury and disease
- > work in alliance with others to facilitate the development and implementation of better preventative approaches, and
- > ensure the needs of small business are integrated into these approaches.

The *National OHS Strategy 2002-2012*, released by the Workplace Relations Ministers' Council on 24 May 2002, records a commitment by all Australian, state and territory governments, the Australian Chamber of Commerce and Industry and the Australian Council of Trade Unions, to share the responsibility of ensuring that Australia's performance in work-related health and safety is continuously improved.

The *National OHS Strategy* sets out five national priorities to achieve short-term and long-term improvements.

The priorities are to:

- > reduce high incidence and high severity risks
- > improve the capacity of business operators and workers to manage OHS effectively
- > prevent occupational disease more effectively
- > eliminate hazards at the design stage, and
- > strengthen the capacity of government to influence OHS outcomes.

In line with these priorities, national standards are declared by ASCC under section 6 of the *Australian Workplace Safety Standards Act 2005* (Commonwealth), and prescribe preventative action to avert occupational deaths, injuries, and diseases. Most national standards deal with the elimination, reduction, or management of specific workplace hazards.

The expectation of the Australian Government and ASCC is that national standards will be suitable for adoption by the Australian, 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.

In common with other ASCC documents, these national standards are advisory instruments only, unless they are made mandatory by a law other than the National Occupational Health and Safety Commission Act or by an award or instrument made under such a law. The application of a national code of practice in any particular State or Territory is the prerogative of that State or Territory.



Contents

Foreword	1
Contents	2
Preface	3
1. Preliminary	4
Name of Standard	4
Scope and Application	4
Objective and Principles	4
Definitions	4
2. General provisions	8
Duty Holders	8
3. Duties of persons who design, manufacture and supply	9
Duty to manage risks of musculoskeletal disorders	9
Communication of safety information	10
4. Duties of persons with control	11
General duty of person with control	11
Risk management	11
Consultation	11
Provision of information, training and supervision	12
5. Duties of workers	13
Workers' duty to take care	13
6. Risk management process	14
Steps – Risk management process for manual tasks	14
7. Schedule of approved codes of practice	16



Preface

'Manual tasks' is physical work activity. In this national standard it is defined as any activity requiring a person to use any part of their musculoskeletal system in performing their work.

Manual tasks can therefore include:

- > lifting, lowering, pushing, pulling, carrying or otherwise moving, holding or restraining any person, animal or item
- > repetitive actions
- > sustained work postures, and
- > exposure to vibration.

Performing some manual tasks can be hazardous, potentially causing musculoskeletal disorders which can lead to death, injury or disease. Between July 1997 and June 2003, manual tasks at work resulted in 437,852 compensation claims in Australia, or 41.6 % of all compensation claims for that period, with a direct cost not counting indirect impacts (including long-term impacts on the quality of life of the injured worker) of \$11.965 billion.

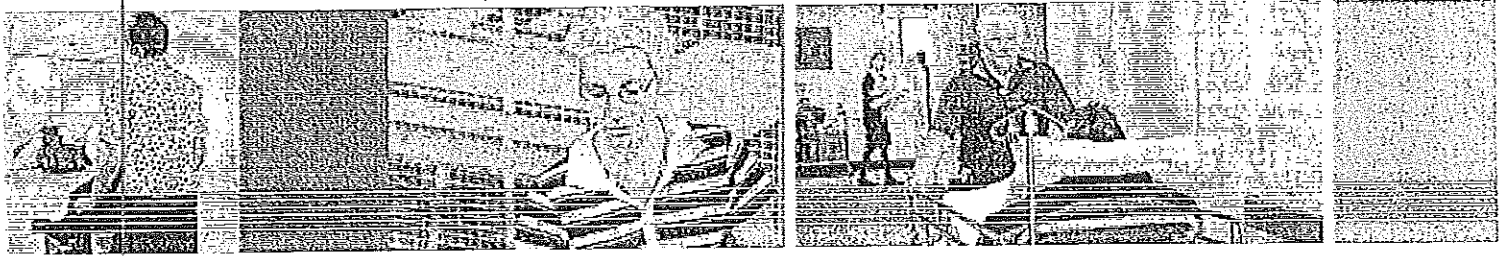
In 1990 *National Standard for Manual Handling* [NOHSC: 1001(1990)] was published. Guidance on how to meet the requirements of this national standard has been provided by the *National Code of Practice for Manual Handling* [NOHSC: 2005(1990)], the *National Code of Practice for the Prevention of Occupational Overuse Syndrome* [NOHSC: 2013(1994)] and other relevant NOHSC guidance notes.

This *National Standard for Manual Tasks* sets out the principles for the effective management of hazardous manual tasks to avert musculoskeletal disorders arising from manual tasks in the workplace. It was released in a draft form for public comment, in line with a decision by the ASCC on 1 March 2005.

This *National Standard for Manual Tasks* was declared by the ASCC, in accordance with section 6 of the *Australian Workplace Safety Standards Act 2005* (Cth), on 22 August 2007. It replaces the *National Standard for Manual Handling* [NOHSC: 1001(1990)].

Compliance with the recommendations in this standard may not necessarily mean that a person has fulfilled their obligations under all relevant occupational health and safety acts and regulations. Persons should contact their state/territory or Australian Government health and safety authority for information on their obligations.

Implementation of this National Standard will require coordinated action on the part of all parties involved including effective reporting and monitoring of preventative actions to avert musculoskeletal disorders as well as injuries. Such information will assist in effectively evaluating the effectiveness of the National Standard and its contribution to improving safety.



1. Preliminary

Name of Standard

1.1 This Standard is the National Standard for Manual Tasks.

Scope and Application

1.2 The scope of this Standard is manual tasks in the workplace.

1.3 This Standard applies to:

- a. persons who design, manufacture or supply items or workplaces;
- b. employers or persons with control of workplaces;
- c. employers or persons with control of work; and
- d. workers or employees.

1.4 An obligation to comply with a provision in this Standard is an obligation to **comply as far as 'reasonably practicable' or equivalent concept**, as defined in this standard.

Objective and Principles

1.5 The objective of this National Standard is to reduce the incidence and severity of musculoskeletal disorders to workers performing manual tasks.

Definitions

1.6 In this Standard, unless the contrary intention appears:

hazard means any thing (including an intrinsic property of a thing), or situation, with the potential to cause or contribute to the development of musculoskeletal disorders to workers performing manual tasks. It may include the type of work performed, the way the work is performed, including use or handling of items, or a combination of these factors.

health and safety representative includes a person elected to represent a group of workers on health and safety issues.

item subject to the scope of duties for designers, manufacturers and suppliers as outlined in part 2, includes the following:

- a. plant;
- b. substance;
- c. building or structure used as a place of work.



Note: An item may also be described in some jurisdictions as materials, packaging, containers, fixtures, fittings, tools, implements, instruments, machinery or electronic equipment. The above definition may include such items where they are relevant in managing the risks posed by a hazardous manual task as defined in this Standard.

manual task means a task comprised wholly or partly by any activity requiring a person to use his or her musculoskeletal system in performing his or her work and can include the use of force for lifting, lowering, pushing, pulling, carrying or otherwise moving, holding or restraining any person, animal or item.

hazardous manual task means

- a. a manual task having any of the following characteristics:
 - i. repetitive or sustained application of force;
 - ii. repetitive or sustained awkward posture;
 - iii. repetitive or sustained movement;
 - iv. application of high force;
 - v. exposure to sustained vibration;
- b. a manual task involving the handling of a person or an animal; or
- c. a manual task involving the handling of unstable or unbalanced loads or loads which are difficult to grasp or hold.

musculoskeletal disorder means an injury or disease of the musculoskeletal system that arises in whole or in part from undertaking manual tasks in the workplace, whether occurring suddenly or over a prolonged period of time, but does not include an injury or disease which is caused by crushing, entrapment or cutting resulting from the mechanical operation of plant or other equipment.

person includes companies and corporate entities such as a body corporate, unincorporated body or association and a partnership.

person who designs means a person who has control over the design, re-design or alteration of an item.

person who manufactures means a person who has control over the making or construction of an item.

person who supplies means a person who has control over the supply, importation, or re-supply of an item.



person with control means:

- a. a person with control of the work such as an employer; or
- b. a person with control of the workplace, such as an owner of a workplace; or
- c. principal contractors, a self-employed person or persons, a person who conducts a business or an undertaking, or a person who has management or control of a business or workplace.
and does not include
- d. workers, employees and supervisors.

Note: person with control of work or a workplace are expressed and applied in differing manners across jurisdictions. Each jurisdiction may adopt their own expression when implementing this Standard.

reasonably practicable means what can be done and which is reasonable in the circumstances taking account of:

- a. the probability (likelihood) of the hazard or risk occurring;
- b. the degree of harm arising from the hazard or risk;
- c. the state of knowledge about the hazard or risk and ways it may be removed or mitigated;
- d. the availability and suitability of ways to remove or mitigate the hazard or risk; and
- e. the cost of removing or mitigating the hazard or risk.

Note: reasonably practicable is expressed and applied in differing manners across jurisdictions. Each jurisdiction may adopt their own expression when implementing this Standard.

risk means the likelihood of a manual task causing musculoskeletal disorders to workers and the likely severity of those musculoskeletal disorders should they occur.

risk control means a method to manage the risks posed by a hazard by eliminating the risks or, if this is not reasonably practicable, minimising the risks of musculoskeletal disorders so far as is reasonably practicable.

system of work includes any of the following:

- a. work processes;
- b. work practices; and
- c. work methods.

use means the act of handling or interacting with any item, system of work or workplace in the course of performing a manual task.



Note: The use of an item or workplace or system of work includes its transport; storage; assembly, erection or installation; commission; operation or use; maintenance; cleaning; testing or inspection; any relevant emergency procedure; decommission; disassembly, dismantling or removal; and safe disposal of the item, workplace, or system of work.

Note: 'use' is expressed and applied in differing manners across jurisdictions. Each jurisdiction may adopt their own expression when implementing this Standard.

work means any activity (physical or mental) carried out in the conduct of a business, an organisation, a trade or a profession, regardless of whether or not:

- a. remuneration is offered for the activity; or
- b. the business is conducted for profit.

worker means an employee or a person who is undertaking work under a contract of employment, an apprenticeship, a traineeship, or other contract of service which may include work experience placements.

workplace means any place where a worker carries out work.

Note: A workplace is not limited to a building or structure.



2. General Provisions

Duty Holders

- 2.1 The duty-holders under this standard are:
- persons who design plant, and buildings or structures used as a place of work;
 - persons who manufacture plant and substances;
 - persons who supply plant and substances; and
 - persons with control.

Note: The Standard applies to workers but does not consider them to be primary duty holders. The specific duties that apply to workers are detailed in Section 5.

- 2.2 A person may have duties associated with more than one of the roles mentioned in Section 2.1.
- 2.3 If two or more persons have the same duty then each person retains responsibility for that duty and must undertake that duty to the extent that they have control or make management decisions over the matter to which the duty relates.
- 2.4 The duty applies to the extent to which the person has control or makes management decisions over the matter to which the duty relates.



3. Duties of persons who design, manufacture and supply

Duty to manage risks of musculoskeletal disorders

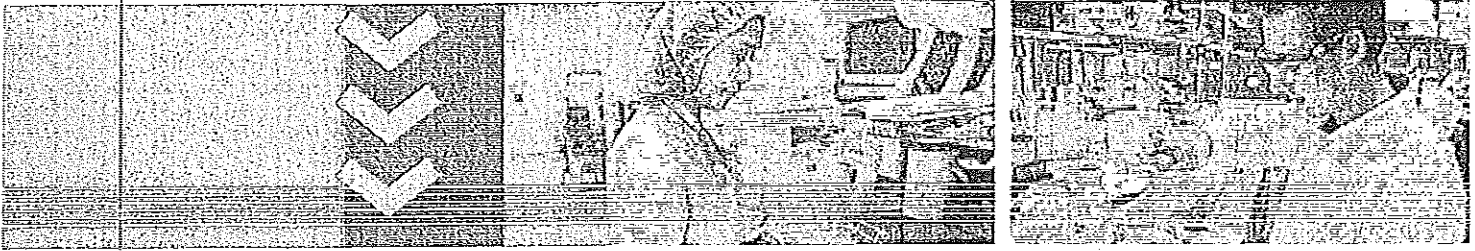
- 3.1 Persons who design, manufacture or supply must, as far as reasonably practicable, eliminate the risks or, if this is not reasonably practicable, minimise the risks of musculoskeletal disorders to workers performing manual tasks that may arise from either:
- the nature of the item designed; or
 - the nature of the item manufactured or supplied by the person; or
 - the manner in which it is supplied.
- 3.2 Persons who supply will be deemed to have met this duty with respect to the nature of the item supplied when either persons who design or persons who manufacture have already fulfilled this duty with respect to the item supplied.
- 3.3 Persons who design an item, or manufacture or supply an item for use during manual tasks must, as far as reasonably practicable, ascertain and take account of in the design, manufacture or supply:
- the intended use(s) of the item;
 - potential hazards that may give rise to musculoskeletal disorders to workers performing manual tasks; and
 - options for the elimination of risks or control of potential risks posed by the hazards.
- 3.4 The duty applies to the extent to which:
- a person has control or makes management decisions over the design, manufacture or supply; and
 - the item is used as intended during manual tasks.

Note: Obligations are also placed on persons who design, manufacture, and supply by the National Standard for Plant [NOHSC:1010 (1994)].



Communication of safety information

- 3.5 Persons who design, manufacture, or supply an item for use during manual tasks must provide information on the risks assessed and control measures required to enable the item or workplace to be manufactured, supplied, and used safely.
- 3.6 This information must include:
 - a. the intended use(s) of the item; and
 - b. options for the elimination of risks, or if this is not reasonably practicable, the minimisation of risks of musculoskeletal disorders to workers performing manual tasks that have not been eliminated by persons who design, manufacture and/or supply at the time of design, manufacture, or supply.
- 3.7 This information must adequately address the residual risks to allow the item to be used as intended in a safe manner.
- 3.8 This information must be updated whenever new information on manual tasks or aspects of the item relevant to their use during manual tasks becomes readily available.
- 3.9 This updated information must be provided with all items subsequently supplied.
- 3.10 The information must be readily understood by persons in control and workers who will use the item during a manual task.
- 3.11 This information must be retained for a minimum period of 7 years unless:
 - a. it is reasonably foreseeable that the item may be used as intended for a longer period; or
 - b. other applicable laws specify a different period of time.



4. Duties of persons with control

General duty of person with control

4.1 A person with control must, as far as reasonably practicable:

- a. identify hazardous manual tasks that may give rise to musculoskeletal disorders in workers handling a person or an animal, or using an item, a system of work, or a workplace;
- b. assess the risks posed by hazardous manual tasks; and
- c. eliminate the risks.

If this is not reasonably practicable, a person with control must minimise the risks of musculoskeletal disorders that may arise from hazardous manual tasks so far as is reasonably practicable.

4.2 A person with control has a duty to the extent to which the person can exercise control over or make management decisions about the work or workplace.

Risk management

4.3 A person with control must undertake a risk management process as set out in Part 6.

4.4 A person with control must undertake a risk management process:

- a. before work involving a manual task commences;
- b. when a musculoskeletal disorder or a hazardous manual task is reported;
- c. when any change, redesign or alteration to structures, the workplace, items or systems of work used in performing manual tasks is proposed that may alter the risks of musculoskeletal disorders; and
- d. when new information on performing manual tasks relating to structures, the workplace, items or systems of work in use becomes available to a person with control.

Consultation

4.5 A person with control must consult workers who undertake manual tasks, health and safety representatives, and, as far as reasonably practicable, other duty holders identified in this Standard about matters affecting health and safety related to manual tasks including:

- a. the provision of information and training, and the identification of hazardous manual tasks, risk assessment, risk control and monitoring of manual tasks; and
- b. any proposed changes, redesign or alteration to structures, the workplace, items or systems of work used during manual tasks that may alter the risks of musculoskeletal disorders.



- 4.6. A person with control must ensure that consultation is undertaken before:
- a. changes are made to the design of a workplace, a system of work, or item used during manual tasks that may alter the risks of musculoskeletal disorders;
 - b. new items or systems of work are introduced, or manual tasks are performed at a new workplace; and
 - c. conducting any step of the risk management process outlined in Part 6.

Provision of information, training and supervision

- 4.7 A person with control of work must provide workers with appropriate information, training and supervision to enable them to:
- a. perform manual tasks safely; and
 - b. participate in the risk management process.
- 4.8 A person with control must provide task-specific information and training on:
- a. safe methods for performing manual tasks;
 - b. the safe use of systems of work; and
 - c. new information affecting manual tasks related to items, systems of work, and workplaces as it becomes available.
- 4.9 A person with control must provide training prior to manual tasks being undertaken, on an ongoing basis, and when any aspect of the work changes.
- 4.10 A person with control must provide all of the above information in a way that takes account of the communication needs of workers.
- 4.11 A person with control must provide supervision of manual tasks to ensure that the hazardous manual tasks are carried out safely and according to the task-specific training provided.
- 4.12 The information, training, and supervision must be adequate to allow the workers to carry out the manual task in a safe manner.



5. Duties of workers

Workers' duty to take care

5.1 Workers who perform manual tasks must, as far as they are able and with respect to manual tasks:

- a. take reasonable care of their own health and safety and the health and safety of others in the workplace;
- b. co-operate with all persons with control in complying with this standard;
- c. comply with all lawful instructions, information and training provided in relation to health and safety by persons with control;
- d. comply with risk control measures as instructed and trained; and
- e. notify persons with control about any matter known to them that affects or might affect the ability of the persons with control to comply with this standard.



6. Risk Management Process

Steps – Risk management process for manual tasks

6.1 In order to manage risks arising from manual tasks, persons with control must, as far as reasonably practicable:

- Step 1: Identify hazardous manual tasks that have given or may give rise to musculoskeletal disorders to workers handling a person or an animal, or using an item, a system of work, or a workplace during a manual task.
- Step 2: Assess the risks posed by hazardous manual tasks.

The risk assessment must take account of the following direct risk factors:

- i. the posture of the worker;
- ii. the forces exerted by the worker and on the worker by the item person or animal;
- iii. speed of movements by the worker;
- iv. exposure of the worker to vibration; and
- v. the duration and frequency of the task.



Step 3: Eliminate the risks or, if this is not reasonably practicable, minimise the risks of musculoskeletal disorders arising from hazardous manual tasks so far as is reasonably practicable by implementing risk control measures.

- a. The method used to minimise the risks must take account of the interaction or potential interaction between the direct risk factors and the following factors that contribute to risk or a source of risk:
 - i. the layout of the workplace;
 - ii. the work environment;
 - iii. the characteristics and locations of any relevant item; and
 - iv. work organisation and the system of work.
- b. One or a combination of the methods listed below must be used to eliminate the risks or, if this is not reasonably practicable, to minimise the risks so far as is reasonably practicable by:
 - i. altering the workplace where the manual tasks are being carried out;
 - ii. altering environmental conditions, including heat and cold, and vibration where the manual tasks are being carried out;
 - iii. altering the work organisation and system of work used to carry out the manual tasks;
 - iv. modifying items used in manual tasks or substituting other items;
 - v. using aids designed to assist in carrying out manual tasks; or
 - vi. providing information, training, instruction, and supervision in a task-specific method for performing a manual task, personal protective equipment, or the combination of these.
- c. The methods used in vi. should be used as the sole or primary means of controlling the risk only where it can be demonstrated that it is not reasonably practicable to achieve risk control by the use of i. to v. above.

Step 4: Monitor and review risk control measures on an ongoing basis to ensure they:

- a. have been implemented;
- b. continue to work to eliminate or minimise the risks of musculoskeletal disorders so far as is reasonably practicable; and
- c. do not result in new hazardous manual tasks.



7. Schedule of Approved Codes of Practice

7.1 The following schedule of codes may be amended, supplemented or deleted from time-to-time by the Australian Safety and Compensation Council:

- a. National Code of Practice for the Prevention of Musculoskeletal Disorders from Performing Manual Tasks at Work

Part 4.4 Manual handling

Note. *Employer*, for the purposes of this Part, includes self-employed persons (see clause 3).

79 Definition

In this Part:

manual handling means any activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any animate or inanimate object.

80 Employer to control risks

- (1) An employer must ensure that:
 - (a) all objects are, where appropriate and as far as reasonably practicable, designed, constructed and maintained so as to eliminate risks arising from the manual handling of the objects, and
 - (b) work practices used in a place of work are designed so as to eliminate risks arising from manual handling, and
 - (c) the working environment is designed to be, as far as reasonably practicable and to the extent that it is within the employer's control, consistent with the safe handling of objects.
- (2) If it is not reasonably practicable to eliminate a risk arising from manual handling, an employer must design the work activity involving manual handling to control the risk and, if necessary, must:
 - (a) modify the design of the objects to be handled or the work environment (to the extent that it is under the employer's control), taking into account work design and work practices, and
 - (b) provide mechanical aids or, subject to subclause (3), make arrangements for team lifting, or both, and
 - (c) ensure that the persons carrying out the activity are trained in manual handling techniques, correct use of mechanical aids and team lifting procedures appropriate to the activity.
- (3) An employer must, as far as reasonably practicable, achieve risk control by means other than team lifting.

Maximum penalty: Level 4.

81 Assessment of risks

An employer, in carrying out a risk assessment in accordance with Chapter 2 in relation to manual handling, must take into consideration (where relevant) the following factors:

- (a) actions and movements (including repetitive actions and movements),
- (b) workplace and workstation layout,
- (c) working posture and position,
- (d) duration and frequency of manual handling,
- (e) location of loads and distances moved,
- (f) weights and forces,
- (g) characteristics of loads and equipment,
- (h) work organisation,
- (i) work environment,
- (j) skills and experience,
- (k) age,
- (l) clothing,
- (m) special needs (temporary or permanent),
- (n) any other factors considered relevant by the employer, the employees or their representatives on health and safety issues.

