University of South Australia

MANUAL HAZARDOUS TASKS – RISK MANAGEMENT GUIDELINE
(Adopted from the SafeWork Australia Code of Practice)

Follow this step by step process to identify and assess manual handling hazards and determine risk controls required.

IDENTIFY

What is the manual task?

Using the body to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing.

Is the manual task hazardous?

Application of force:	Posture:	Movement:	Exposure to vibration
• Repetitive • Sustained • High • Sudden	• Sustained • Awkward	• Repetitive	

CONSULT

ASSESS

What is the risk of MSD?

- How often and how long are specific postures, movement or forces performed or held?
- What is the duration of the task?
- Does the task involve high or sudden force?
- Does the task involve vibration?

CONSULT

What is the source of risk?

Work area design and layout	Systems of work	Nature, size, weight and number of persons, animals or things handled	Work environment

CONTROL

- Is the task necessary?
- Can the source of risk (work area layout, environment, etc.) be changed?
- Can mechanical aids be used to perform the task?
- What training is needed to support the control measures?

CONSULT

REVIEW

- when the control measure is no longer effective
- before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control
- if a new hazard or risk is identified
- if the results of consultation indicate that a review is necessary
- if a health and safety representative at the workplace requests a review.

CONSULT

APPENDIX B – HAZARDOUS MANUAL TASK IDENTIFICATION WORKSHEET

Work area:

Management representative:

Health and Safety representative and workers taking part:

Date:

Does the task have any of the characteristics of a hazardous manual task? (tick any of the following that apply)

Task	Repetitive or sustained force	High or sudden force	Sustained or awkward postures	Repetitive movement	Exposure to vibration
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

If you ticked any boxes for a particular task, you should do a risk assessment of that task.

APPENDIX C – DISCOMFORT SURVEY

A discomfort survey can help identify hazardous manual tasks. Early reporting of symptoms can lead to risk controls being put in place before injury occurs.

The survey sheet below will help you identify and record instances where workers experience discomfort that:

> persists, or

> re-occurs the next day, or

> persists after rostered days off.

Encourage workers to report pain or discomfort at work or at any other time. Follow up the reasons for the problem. Even if only one worker reports problems, assess the presence of a risk factor.

Name (optional) _____

Date _____

Job work location _____

Tasks involved _____

Time on this job: Less than 3mths ☐ 3mths to 1 yr ☐ 1 to 5 yrs ☐

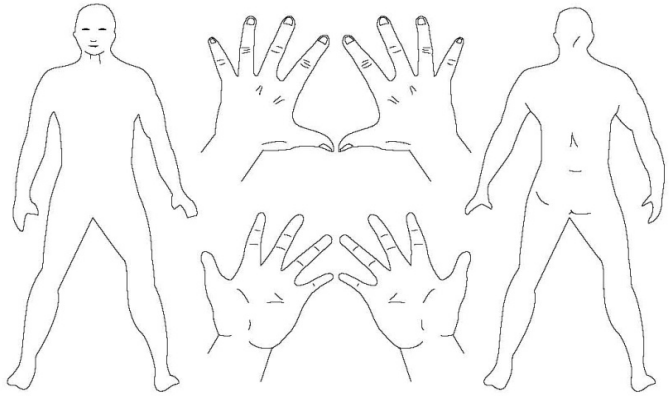
Supervisor _____

1. Do you suffer from swelling, numbness, tingling, 'pins and needles' stiffness, aches and pains in any part of the body? Indicate in the diagrams where the problem occurs.

2. Rate the level of discomfort/pain on a scale of 1 to 5

1. _____ 2. _____ 3. _____ 4. _____ 5. _____

Just noticeable — Moderate — Unbearable



3. What do you think caused the problem?

_____

_____

_____

_____

APPENDIX D – RISK ASSESSMENT WORKSHEET

Location of task:	**Management rep:**
Description of hazardous manual task:	**Health and Safety rep:**
Date of assessment:	**Others (workers, consultants):**

Reason for identification

☐ Existing task	☐ Change in task, object or tool	☐ Report of musculoskeletal disorder (MSD)
☐ New task	☐ New information	

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

As a guide;

- repetitive means the movement or force is performed more than twice a minute and
- sustained means the posture or force is held for more than 30 seconds at a time.

Postures and Movements (place a tick in the 'yes' column each time you observe repetitive movement or sustained posture)		Yes ✓	This action happens when...	because... (describe why) This is the source of the risk	If any boxes are ticked, what are possible controls to reduce the risk
BACK					
Bending or twisting e.g. more than 20 degrees	Forwards	☐			
	Sideways	☐			
	Twisting	☐			
Bending e.g. more than 5 degrees	Backwards	☐			

Postures and Movements (place a tick in the 'yes' column each time you observe repetitive movement or sustained posture)		Yes	This action happens when...	because... (describe why) This is the source of the risk	If any boxes are ticked, what are possible controls to reduce the risk
NECK OR HEAD					
Bending or twisting e.g. more than 20 degrees	Forwards	☐			
	Sideways	☐			
	Twisting	☐			
Bending e.g. more than 5 degrees	Backwards	☐			
ARMS/HANDS					
Working with one or both hands above shoulder height		☐			
Reaching forwards or sideways more than 30cm from the body		☐			
Reaching behind the body		☐			
Excessive bending of the wrist		☐			
Twisting, turning grabbing, picking or wringing actions with the fingers, hands or arms		☐			
LEGS					
Squatting, kneeling, crawling, lying, semi-lying or jumping.		☐			
Standing with most of the body's weight on one leg		☐			
VERY FAST MOVEMENTS		☐			

FORCES (Place a tick in the 'yes' column each time you observe repetitive or sustained forces)	Yes	This action happens when…	because... (describe why) This is the source of the risk	If any boxes are ticked, what are possible controls to reduce the risk
Lifting or lowering	☐			
Carrying with one hand or one side of the body	☐			
Exerting force with one hand or one side of the body	☐			
Pushing, pulling or dragging	☐			
Very fast actions	☐			
Working with the fingers close together or wide apart	☐			
Applying uneven, fast or jerky forces	☐			
Holding, supporting or restraining anything (including a person, animal or tool)	☐			

Step 2 – Does the task in step 1 involve long duration?

Tick yes if the task is done for:

Duration	Yes	Comments
More than 2 hours over a whole shift,	☐	
Continually for more than 30 minutes at a time	☐	
If you ticked yes then the task is a risk and must be controlled		

Step 3 – Does the task involve high or sudden force?

FORCES (Tick yes if the task involves any of the following high or sudden forces, even if the force is applied only once)	Yes	This action happens when...	because... (describe why) This is the source of the risk	If any boxes are ticked, what are possible controls to reduce the risk
Lifting, lowering or carrying heavy loads	☐			
Throwing or catching	☐			
Hitting or kicking or jumping	☐			
Applying a sudden or unexpected force including: • handling a live person or animal or • applying uneven, fast or jerky forces during lifting, carrying, pushing or pulling or • Pushing or pulling objects that are hard move or stop eg a trolley	☐			
Exerting force while in an bent, twisted or awkward posture including: • supporting items with hands are above shoulder height or • moving items when legs are in an awkward posture, working with fingers pinched together or held wide apart • Using a finger grip or pinch grip or an open handed grip	☐			
Exerting a force with the non-preferred hand	☐			
Needing to use two hands to operate a tool designed for one hand	☐			
The task can only be done for short periods of time	☐			
Two or more people need to be assigned to handle a heavy, awkward or bulky load	☐			
Workers report pain or significant discomfort during or after the task	☐			
Stronger workers assigned to do the task	☐			
Employees say the task is physically very strenuous or difficult to do	☐			
Workers think the task should be done by more than one person, or seek help to do the task as it requires high force	☐			

Step 4 – Is there hand, arm or whole body vibration?

Tick yes if any of the following environmental factors are present in the task.

	Yes
Driving for long periods	☐
Driving on rough roads	☐
Frequent use of hand powered tools or use for long periods	☐
Using high grip forces or awkward postures when using power tools	☐
Use of machines or tools where the manufacturer's handbook warns of vibration	☐
Workers being jolted or continuously shaken	☐
Use of a vehicle or tool not suitable for the environment or task	☐

Step 5 – Is there a risk?

Did you answer yes in step 1 and step 2? The task is a risk. Risk control is required.

Did you answer yes in step 3? The task is a risk. Risk control is required.

Did you answer yes in step 4? This task requires further investigation.

To aid prioritisation of timing and resourcing risk controls you may also need to consider:

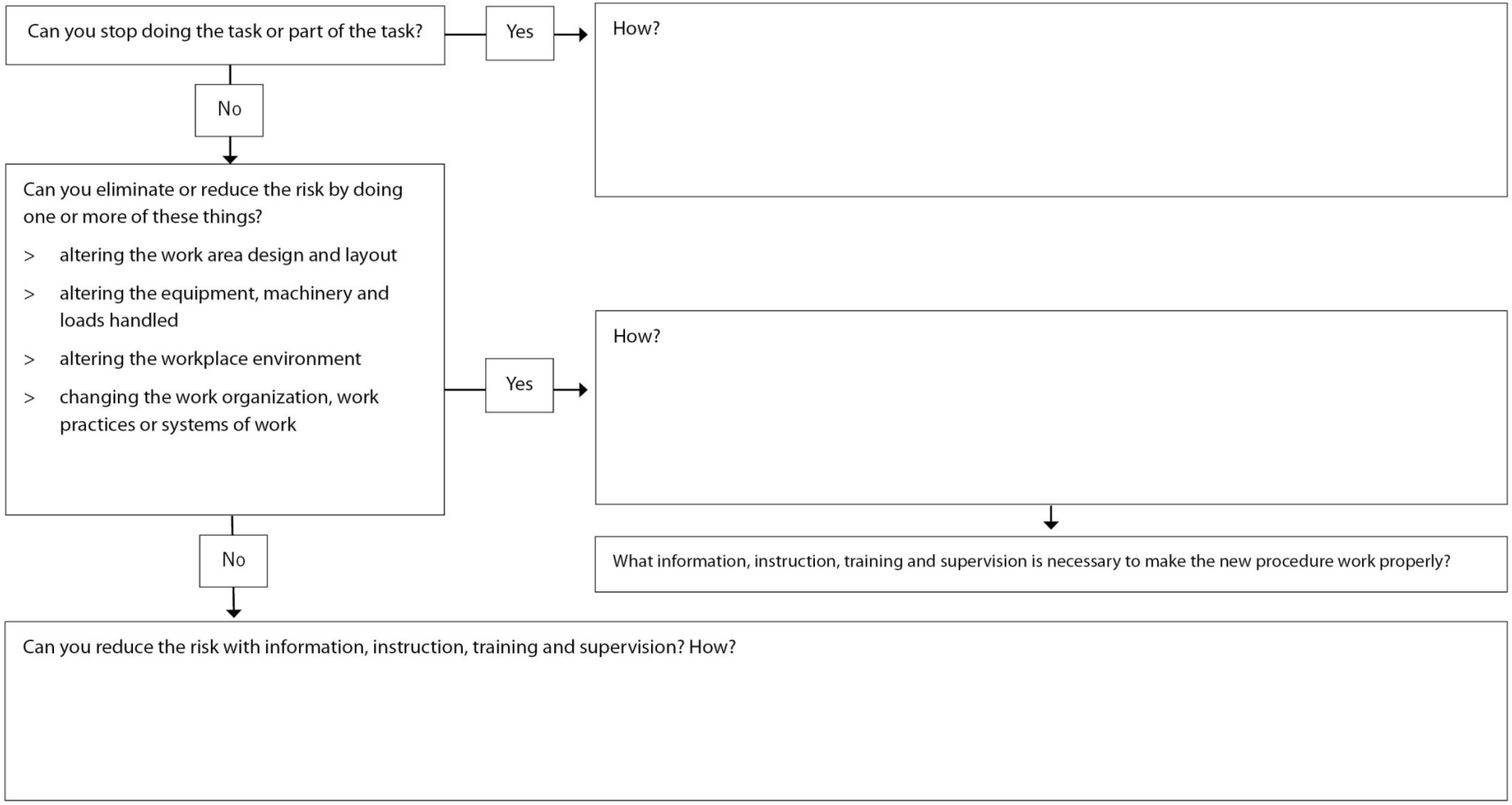
- Number of ticks or risk factors.
- Additional factors such as injuries associated with the task.

These items capture degree and likelihood of harm. You will also need to consider the availability and suitability of risk controls for the task.

RISK CONTROL

What needs to be fixed to control the risk? (Refer Section xx)

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



APPENDIX E – CONTROLLING MSD RISKS THROUGH DESIGN

Type of plant	MSD risk	Possible design solution
Road-making machinery	Repetitive or sustained twisting of the neck and body while reversing. This is caused by the seat being fixed in a forward-facing position.	Design a swivel seat-mount together with two sets of controls, or controls that move with seat rotation.
Forklifts	Sustained exposure to whole-body vibration transferred through the seat. Repetitive or sustained bending of the neck and back to see the work properly (for example, continually looking up to place loads on high shelves).	Install damping mechanisms in the seat, cabin and vehicle suspension. Install visual aids such as mirrors or a video camera and screen.
Wrapping machines on process lines	Strain on the lower back when handling heavy rolls of plastic wrapping in awkward and twisted postures, often above shoulder height. This is caused by inappropriate design and positioning of the roll spindle and by restricted access.	Design the spindle to be adjustable. This allows the rolls to be loaded at a suitable height and orientation, and eliminates the need to lift them. Design equipment to help worker load rolls. Locate the spindle in an accessible place on the plant. Provide information about how to install the plant in a way that allows adequate access.
Power drills	Prolonged use of the forearm muscles and wrist caused by a heavy or poorly balanced drill. Exposure to vibration or impact shock recoil from hammer drills. Excessive force needed to grip and control the tool to counter the effect of vibration and impact shocks.	Design drills to be as light as possible. Design drills with the handle under the drill's centre of gravity. Design plant to reduce shock and vibration. Provide a suitable way of holding the tool with both hands.
Pliers	Pressure to the palm of the hand caused by handles that are too short. Prolonged use of the forearm muscles and compression of the wrist caused by using pliers with straight handles.	Design pliers with handles that extend beyond the palm. Design pliers with bent handles so that the user can maintain a straight wrist.
Crimping, clamping and cutting tools	Excessive force with outstretched fingers required to grip handles that are too wide apart.	Design handles with a grip span of 10 cm or less.
Chainsaws	Excessive vibration. High force required to handle the chainsaw.	Design to reduce vibration. Design the chainsaw to be as light as possible, and provide well-placed handles.
Chairs	Poorly designed chairs that cannot be adjusted provide little back support and cause workers to adopt poor postures and movements.	Follow existing design guidelines for chairs, and consider how the chair will be used in the workplace.
Work-benches, workstations and other work surfaces	Workstations that cannot be adjusted result in unnecessary reaching, bending and exertion of force.	Design workstations to be adjustable. Alternatively, dimensions should suit as many workers as possible.