

HAZARDOUS MANUAL TASKS

Manual tasks cover a wide range of activities that involve using the body to move or hold an object, people or animals. Examples of manual tasks include stacking shelves, working on a conveyor line and entering data into a computer. Not all manual tasks are hazardous. It is therefore necessary to identify those tasks that are hazardous and ensure they are adequately managed.

WHAT IS A HAZARDOUS MANUAL TASK?

A task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing involving one or more of the following:

- repetitive or sustained force
- high or sudden force
- repetitive movement
- sustained or awkward posture
- exposure to vibration.

These five factors are also known as the characteristics of a hazardous manual task.

WHAT ARE MUSCULOSKELETAL DISORDERS?

Musculoskeletal disorders (MSDs) include injuries such as sprains and strains of muscles, ligaments, tendons and joints.

MSDs most commonly occur from gradual wear and tear to these parts of the body. More than a third of the workers compensation claims in NSW are MSDs and the majority of these are caused by performing hazardous manual tasks.

Parts of the body that are commonly affected include the back, neck, shoulder, elbow, wrist, abdomen and knees.

HOW DO I MANAGE THE RISKS FROM HAZARDOUS MANUAL TASKS?

A person conducting a business or undertaking (PCBU) must manage risks to health and safety relating to a MSD that are associated with a hazardous manual task ([Work Health and Safety Regulation 2017](#)).

To manage risk, a duty holder must:

- identify hazards that could give rise to the risk
- eliminate the risk so far as is reasonably practicable
- if not reasonably practicable to eliminate the risk, minimise the risk by implementing control measures in accordance with the hierarchy of control
- maintain the control measure so that it remains effective
- review risk control measures ([Work Health and Safety Regulation 2017](#)).

An overview of the risk management process for manual tasks is provided in Appendix A of the *Code of Practice – Hazardous Manual Tasks*.

CONSULTING YOUR WORKERS

You must consult with your workers who are affected, or likely to be affected, by the manual task. If your workers have a health and safety representative, you must also consult with them ([Work Health and Safety Act 2011 No 10](#)).

The first step in managing risks from carrying out manual tasks is to identify those tasks that have the potential to cause MSDs. Hazards that arise from manual tasks generally involve interaction between a worker and:

- the work tasks and how they are performed
- the tools, equipment and objects handled
- the physical work environment.

HOW DO I IDENTIFY HAZARDOUS MANUAL TASKS?

- Consult your workers – they can provide valuable information about discomfort, muscular aches and pains that can signal potential hazards.
- Observe manual tasks – identify if they involve any of the characteristics of a hazardous manual task.
- Look for trends – you may be able to identify trends or common problems from the data you collect. Trends may show that certain tasks have more characteristics that make them hazardous or that some characteristics are more common in certain jobs. Trends may help in deciding which manual tasks should be addressed as a priority.
- Review available information – records of workplace injuries and incidents, inspection reports and workers compensation claims can help identify which manual tasks may cause harm.

HOW DO I ASSESS THE RISKS?

A risk assessment involves examining the characteristics of the hazardous manual task in more detail to assess whether the forces, movements and postures are undertaken in such a way that they give rise to the risk of MSDs.

You should carry out a risk assessment for any manual tasks that you have identified as being hazardous, unless the risk is well known and you know how to control it.

A risk assessment can help you determine:

- which postures, movements and forces of the task pose a risk
- where during the task they pose a risk
- why they are occurring
- what needs to be fixed.

HOW DO I DETERMINE THE RISK FACTORS?

Working through the following questions will assist in determining which postures, movements and forces of the task pose a risk.

The *Code of Practice – Hazardous Manual Tasks* provides guidance that will assist in answering these questions.

QUESTION 1: DOES THE TASK INVOLVE ANY OF THE FOLLOWING:

- repetitive movement?
- sustained or awkward postures?
- repetitive or sustained forces?

As a general guideline, ‘repetitive’ means that a movement or force is performed more than twice a minute and ‘sustained’ means a posture or force is held for more than 30 seconds at a time.

Sustained posture – where part of or the whole body is kept in the same position for a prolonged period.

Awkward posture – where any part of the body is in an uncomfortable or unnatural position, such as:

- postures that are unbalanced or asymmetrical
- postures that require extreme joint angles or bending and twisting.

QUESTION 2: DOES THE TASK OCCUR OVER A LONG TIME?

If a ‘yes’ response is given to Question 1, then the time taken to complete the task should be determined.

As a general guideline, if the task is done for more than a total of two hours over a whole shift, or continuously for more than 30 minutes at a time, there is a risk of MSD.

QUESTION 3: DOES THE TASK INVOLVE HIGH OR SUDDEN FORCE?

Force is the amount of muscular effort required to perform, attempt to perform, resist or change a movement. Forceful muscular exertions can overload muscles, tendons, joints and discs and are associated with most musculoskeletal disorders.

High force is exerted when large loads, relative to the body part doing the activity, are placed on muscles and other tissues. An indicator of a high force is when a worker describes a task as physically demanding, needs help to do it, requires a stronger person or two people to do the task, or where a normally one-handed task requires two hands.

Sudden force occurs when there is a rapid increase or decrease in muscular effort.

Examples of sudden force include jarring, jerky or unexpected movements. It is particularly

hazardous because the body must suddenly adapt to the changing force. Tasks which include sudden force typically generate high force as well.

QUESTION 4: DOES THE TASK INVOLVE VIBRATION?

Prolonged exposure to whole body or hand arm vibration increases the risk of MSDs and other health problems. The degree of risk increases as the duration of exposure increases and when the amplitude of vibration is high. Examples of tasks involving vibration include the use of hand powered tools or operating mobile plant.

QUESTION 5: IS THERE A RISK?

The task involves a risk of MSD if you have answered 'yes' to either:

- Question 1 and Question 2
- Question 3

If you answered 'yes' to Question 4, the task may be a risk but requires further investigation.

A task may involve more than one risk factor. The more risk factors that are present, the higher the risk of MSD.

If you identify a risk, you need to think about the sources of these risks that are present in the task as you may be able to change these to eliminate

or reduce the risk of MSD.

The main sources of risk are:

- work area design and layout
- the nature, size, weight or number of things handled in performing the manual task
- systems of work
- the environment in which the manual task is performed.

The *Code of Practice - Hazardous Manual Tasks* provides further guidance about assessing risks.

The following publications contain more information' please add 'Hazardous manual tasks - Risk management worksheet.

HOW DO I CONTROL THE RISK?

The work health and safety regulations require duty holders to work through the hierarchy of control to choose the control that most effectively eliminates or minimises the risk. This may involve a single control measure or a combination of two or more different controls.

Eliminating the risk is the most effective control measure and involves eliminating the hazardous manual task and its associated risk. If it is not reasonably practicable to eliminate the risk, then you must minimise the risks so far as is reasonably practicable.

Hierarchy of control		Examples of control measures
Level 1	Elimination	<ul style="list-style-type: none"> • Automate the manual task (such as using remote controls). • Deliver goods directly to the point of use to eliminate multiple handling.
Level 2	Substitution	<ul style="list-style-type: none"> • Replace heavy items with those that are lighter, smaller and/or easier to handle. • Replace hand tools with power tools to reduce the level of force required to do the task.
	Isolation	<ul style="list-style-type: none"> • Isolate vibrating machinery from the user, for example, by providing fully independent seating on mobile plant.
	Engineering	<ul style="list-style-type: none"> • Use mechanical lifting aids. • Provide workstations that are height adjustable.
Level 3	Administrative	<ul style="list-style-type: none"> • Rotate workers between different tasks. • Arrange workflows to avoid peak physical and mental demands towards the end of a shift.
	Personal protective equipment	<ul style="list-style-type: none"> • Heat resistant gloves for handling hot items. • Shock absorbent shoes for work on hard concrete floors.

To implement the most effective controls you should:

- Start at the top of the hierarchy of control.
- Enable workers to trial controls and give their feedback before decisions are made to make them permanent.
- Talking with workers to identify appropriate controls.
- Communicate the reasons for the change to workers and others.
- Ensure that any equipment used in the manual task is properly maintained.
- Provide training to ensure workers can competently implement the risk controls. Training should include information about manual tasks risk management, specific manual task risks and how to control them. Use of mechanical aids, tools, equipment and safe work procedures and how to report a problem or maintenance issue.

Training in lifting techniques must not be used as the sole or primary means to control the risk of MSDs.

REVIEWING CONTROL MEASURES

Control measures that have been implemented must be reviewed and, if necessary, revised to make sure they work as planned and to maintain a work environment that is without risks to health and safety.

You should review control measures after an incident or near/miss situation:

- when the control measure is no longer effective
- before a change is made that is likely to give rise to a new or different risk
- if a new hazard is identified
- if consultation indicates a review is necessary
- if a health and safety representative requests a review.

This material has been adapted from manual tasks worksheets from Workplace Health and Safety Queensland and SafeWork SA.

Disclaimer

This publication may contain information about the regulation and enforcement of work health and safety in NSW. It may include some of your obligations under some of the legislation that SafeWork NSW administers. To ensure you comply with your legal obligations you must refer to the appropriate legislation.

Information on the latest laws can be checked by visiting the NSW legislation website www.legislation.nsw.gov.au

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FURTHER INFORMATION

For more information about hazardous manual task risk management, visit www.safework.nsw.gov.au or contact Customer Experience 13 10 50.

The following publications contain more information:

- [Work Health and Safety Regulation 2017](#)
- [Code of Practice - Hazardous Manual Tasks](#)