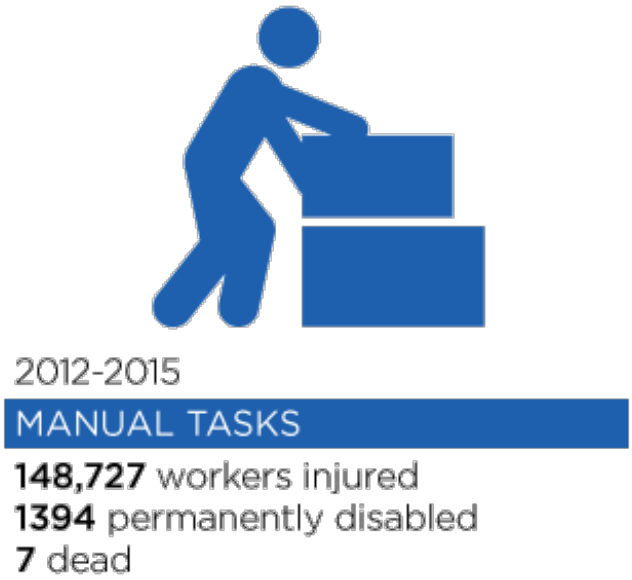
Manual tasks

For many businesses, manual tasks are an important part of getting the job done. Some of these tasks can be hazardous and are often the most common cause of workplace injuries.

Injuries can occur from a number of different tasks – such as sitting for too long, doing the same task again and again, over-reaching and handling heavy items – and they can have long-term, costly impacts on your workers and your business.



A manual task involves using your body to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing. Most jobs involve carrying out some type of manual tasks, but not all of them are hazardous.

A manual task becomes hazardous when one or more of the following risk factors are present:

- repetitive or sustained force
- high or sudden force
- repetitive movement
- sustained or awkward posture
- vibration

Between 2012 and 2015, more than 145,000 workers were injured in NSW workplaces as a result of manual tasks. Seven died and more than 1300 were permanently disabled.

This video provides simple, clear advice on how to reduce sprains and strains at your workplace.

Watch Video At: https://youtu.be/MikWFPxgPfI

Sprains and strains

Must do's

There are specific laws about managing hazardous manual tasks, as well as a code of practice.

Some laws are general while others relate to designers, manufacturers, suppliers and importers of plant.

You need to think about everything that could lead to musculoskeletal disorders, or sprains and strains.

Below, we summarise the laws and give you some practical tips.

Follow a simple risk management approach

The best way to effectively manage the risks associated with a hazardous manual task is to talk to your workers and follow a systematic process that involves:

- identifying manual tasks that are hazardous
- if necessary, assessing the risks of injury associated with the hazardous manual task
- implementing high level risk control measures

- reviewing the effectiveness of control measures.

For a simple summary of this process, refer to the risk management process for hazardous manual tasks flowchart.

Further information

Hazardous manual tasks - Overview

Hazardous manual tasks - Risk management worksheet

This is a legal requirement under the WHS Regulation - Part 3.1 and Clause 60

Talk to your workers

Talking to your workers should be the very first step taken to proactively manage their health and safety. They should be the key source of information on the demands of their job, as they often know best what works and what doesn't. Ask them:

- What makes them sore at work?
- When do they feel discomfort?
- What jobs do they avoid doing?

By asking these questions you will find out what jobs have the potential to hurt them, instead of waiting for an injury to occur.

Those businesses that actively consult with their workers have much better safety outcomes than those who do not.

This is a legal requirement under the WHS Act - Section 46-49

Identify the issues

When a worker is required to perform a manual task, look for the following factors that make the task hazardous, therefore increasing the likelihood of a worker getting hurt:

- forceful exertions, such as pushing, pulling, lifting and gripping
- awkward postures, such as bending, over-reaching, arching and twisting
- vibrations to the hands, arm or body
- movements or forces that are repetitive (more than two per minute) and/or sustained (held for more than 30 seconds)
- The duration of the task and movements: look at how long the task is performed for, continually without a break and over the entire shift

Fix the problem

The most effective and reliable way to fix hazardous manual tasks is to follow and adhere to the hierarchy of control. In fact, the work health and safety regulations state that a business MUST work through this hierarchy when choosing a control measure to implement.

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 follow the hierarchy in order to minimise the risks.

Providing 'how to lift safely' training must not be used as the sole or primary means to control hazardous manual tasks. This type of control is not effective in fixing the problem

Hierarchy of control		Example of control measures
Level 1	Elimination	• Automate the manual task (such as using remote controls) • Deliver goods directly to the point of use to eliminate manual handling
	Substitution	• Replace heavy items with those that are lighter, smaller and/or easier to handle • Replace hand tools with power to reduce the level of force required to do the task
	Isolation	Isolate vibrating machinery from the user eg by providing fully independent seating on mobile plant
Level 2	Engineering	• Use mechanical lifting aids • Provide workstations that are height adjustable
	Administrative	• Rotate workers between different tasks • Arrange workflows to avoid peak physical and mental demands towards the end of a shift
Level 3	Personal protective equipment	• Heat resistant gloves for handling hot items • Shock absorbant shoes for work on hard concrete floors

To implement the most effective controls, you must:

- Look at the root cause of the problem:
    - workplace environmental conditions
    - the design of the work area
    - the layout of the workplace
    - the systems of work used, and
    - the nature, size, weight or number of persons, animals or things involved in carrying out the hazardous manual task
- Start at the top of the hierarchy of control.
- Talk with workers to identify appropriate controls.
- Enable workers to trial controls and give their feedback before decisions are made to make them permanent.
- Communicate the reasons for the change to workers and others.
- Ensure that any equipment used in the manual task is properly maintained.
- Provide training and supervision to ensure workers can competently implement the risk controls.

Training should include information about manual tasks risk management, specific manual tasks risks and how to control them.

This is a legal requirement under the WHS Regulation - Part 3.1 and Clause 60

Effectiveness of lifting technique training

Lifting technique training continues to be used as a primary way to control manual task risks in the workplace. However, the research evidence shows that providing lifting technique training is not effective in minimising the risk of injury from manual tasks.

The main reason lifting technique training is not effective is because the risk factors causing the problem are not changed. Even if workers attempt to apply 'safe lifting' techniques, they may still be exposed to a serious injury risk

The evidence

The Cochrane Collaboration

The Cochrane Collaboration conducted a systematic review in 2011 to determine the effectiveness of manual handling advice and training and the use of assistive devices in preventing and treating back pain in workers.

Cochrane found moderate evidence to prove manual handling advice and training is no more effective at preventing back pain related disability than having no intervention.

Verbeek, J., Martimo, K., Karppinen, J., Kuijer, P., Viikari-Juntura, E., & Takala, E. (2011). Manual material handling advice and assistive devices for preventing and treating back pain in workers. *Cochrane Database of Systematic Reviews,* (6), Art. No.: CD005958. doi:10.1002/14651858.CD005958.pub3

British Medical Journal

In 2008, research published in the British Medical Journal, concluded 'there is no evidence to support use of advice or training in working techniques for preventing back pain or consequent disability'.

The training interventions that were studied focused on lifting techniques, with training duration varying from a single session to training once a week for two years.

Martimo, K., Verbeek, J., Karppinen, J., Furlan, A., Takala, E., Kuijer, P., ... Viikari-Juntura, E. (2008). Effect of training and lifting equipment for preventing back pain in lifting and handling: systematic review. *British Medical Journal, 336*(7641), 429—434. doi:10.1136%2Fbmj.39463.418380.BE

Postal workers study

In this study, approximately 4000 US postal workers were involved in a randomised control trial* for more than five years from 1985 to 1990, to test the effectiveness of manual handling training.

The study included workers and supervisors being taught principles of back safety, core lifting and handling posture, exercises and pain management. A refresher training session occurred six months later and then on a yearly basis.

The study concluded that:

- the training program did not reduce the rate of lower back injury
- there was no significant difference in the median cost per injury
- there was no difference in the rate of musculoskeletal disorders or handling behaviours.

Half way through the study, a survey was conducted to measure knowledge gained and behaviour changes made by the group. The survey found significant increases in the knowledge of safe lifting behaviour among workers, but no significant improvement in actual lifting behaviour or reduction in reported discomfort.

Daltroy, L., Iversen, M., Larson, M., Lew, R., Wright, E., Ryan, J., ... Liang, M. (1997). A controlled trial of an educational program to prevent low back injuries. *The New England Journal of Medicine, 337*(5), 322—328.

Designers, manufactures, suppliers and importers

The best time to eliminate and minimise the risk of injury is in the design and planning stage – when hazards and risks can be ‘designed out’ before they are introduced into a workplace.

Ergonomic principles should be applied in the design stage. This means that a job and workplace should be designed to fit the people doing the task, not the reverse. It involves consideration and understanding of how people interact with the work environment, tools and equipment.

Designers, manufacturers, importers and suppliers of plant and structures have duties under the WHS Act to ensure, so far as is reasonably practicable, that structures and products are without risks to health and safety when used for a purpose for which they were designed or manufactured.

Design of a workplace

Designers of buildings used as workplaces should consider the manual tasks that may be performed throughout the lifecycle of the building, from construction through to use, maintenance, refurbishment and potential demolition.

Some types of workplaces, such as hospitals, nursing homes, warehouses and distribution centres, carry out a high level of manual tasks and as such, will require particular design requirements to eliminate and minimise the risk of injury to workers

Design of plant

The safe design of plant can play a critical role in reducing the risk of injury for workers. When designing plant, consider all phases of its life, including manufacture, cleaning and servicing.

If practicable, trial a prototype in a range of operating conditions and think about the plant will be used and change any aspect of the design that increases the risk of injury

This is a legal requirement under the WHS Regulation - Clause 61
Participative ergonomics for manual tasks (PErforM)

Participative **Er**gonomics **for M**anual Tasks (PErforM) is a simple manual task risk management program based on participative ergonomics, an internationally recommended approach for reducing musculoskeletal disorders.

Presentations from the MSD Symposium 2018

Find out more

Musculoskeletal disorder strategy 2017-2022

By 2022, NSW aims to achieve a 50 per cent decline in the incidence rate of serious musculoskeletal injuries and illnesses. This strategy outlines how SafeWork intends to meet this target.

Find out more
Search by keyword or industry Type search term...

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