

FACT SHEET

A WAY TO IDENTIFY, ASSESS AND MANAGE WORK RISKS

This guidance describes a process that a person conducting a business or undertaking (PCBU) could follow to identify, assess and manage risks arising from work. While following this guidance is not mandatory, it is designed to give PCBUs who need help a starting point.

See the fact sheet '*How to manage work risks*' for a simplified version of the process described in this fact sheet.

MANAGING WORK RISK

Risks to health and safety arise from people being exposed to hazards (anything that can cause harm). Risk has two components - the consequences (degree of harm) if it happens, and the likelihood that it will occur. PCBUs must manage health and safety risks.

Risks to health and safety must be eliminated so far as is reasonably practicable. If a risk can't be eliminated, it must be minimised so far as is reasonably practicable.

The following risk management framework describes four steps that can help PCBUs with managing work health and safety risks.

Risk management is not just hazard spotting. It involves identifying and then assessing which work risks to manage.

Dealing with all work hazards isn't an effective way to manage risks (eg a substance that is toxic to people only after they have been exposed to large amounts will not be a health risk if the workplace only holds and occasionally uses small amounts of it).

OVERVIEW OF A RISK MANAGEMENT PROCESS

You could use the following process to identify, assess and manage work risks.

Step 1 (Identify): Identify the work hazards that could harm workers or others.

Step 2 (Assess): To identify the risks to be managed, think about:

- > who is exposed to the hazard
- > how likely could harm arising from the hazard occur
- > what could happen if the harm does occur.

Step 3 (Manage): Then work out what you can do to:

- > reduce how serious the harm is if it does occur
- > prevent or reduce the chances of the harm occurring.

You then must decide how you will deal with a risk – eliminate (eg remove the hazard) or if you can't eliminate, minimise (eg put in place control measures).

Step 4 (Monitor): Regularly check your control measures are still working to manage the risk. This may include workplace exposure monitoring and worker health monitoring to measure the effectiveness of your controls.

REVIEW FOR CONTINUOUS IMPROVEMENT

Workplaces change. You should review your work activities on an ongoing basis to identify new risks including when new equipment or processes are to be used.

Steps 1-4, and the ongoing process of reviewing controls are described below.

STEP 1:

IDENTIFY

IDENTIFYING HAZARDS THAT COULD GIVE RISE TO REASONABLY FORESEEABLE RISKS

Thinking about your work activities, identify what could harm the health or endanger the safety of your workers and others (eg visitors, bystanders, or someone else's workers). This harm can be acute (occur immediately) or chronic (occur slowly over a long period of time).

Consider if you have vulnerable workers (eg young people, pregnant women or workers with impaired mobility).

While work can affect health, health can also affect work. Consider whether your workers' general health could reduce their ability to work safely (eg workers with poor hearing may not be able to hear vehicles approaching).

Identify work hazards that could give rise to reasonably foreseeable risks. This doesn't mean identifying every hazard – identify those you can reasonably expect to occur in the workplace or as part of your work.

Helpful hint

Get a good understanding of the potential hazards from your work. This includes investigating incidents, accidents or near misses.

WHAT SHOULD YOU LOOK AT?

Think about your entire workplace and work processes.

Consider whether:

- > the plant and structures at your workplace are safe
- > the plant, structures and substances at your workplace are being safely used, handled, stored and maintained
- > your work practices are safe.

Look at:

- > your work processes and the vehicles, machinery, and equipment used:

- during 'business as usual'
 - during different shifts
 - during the repair or maintenance of machines
 - during the clearing of jammed machines
 - for 'non-business as usual' events such as shutdowns
- > the workplace itself
 - > any emergencies or unexpected events that have occurred
 - > worker behaviour including possible intentional misuse of equipment.

Engage with your workers when identifying hazards as they often know what could lead to harm.

Helpful hint

Think about:

- > the physical work environment (including lighting, ventilation, dust, heat, wet areas and noise)
- > the nature of the work (eg repetitive movements)
- > the psychological work environment (including overcrowding, deadlines, work arrangements such as shift work and overtime, and other stress factors)
- > for more information on work-related health see the [WorkSafe position on occupational \(work-related\) health](#).

Helpful hint

To gather information you could:

- > look at your machinery/equipment instruction manuals and chemical safety data sheets for hazard information
- > look at your incident, accident and near miss registers if you have them
- > look at the findings of your investigations into incidents, accidents and near misses
- > ask your workers to help to identify possible harms.

Helpful hint

When considering the physical activities your workers carry out and the potential risks that may arise from them, you could think about:

- > do they lift, push, pull or carry?
- > are there repetitive tasks?
- > are there awkward movements (eg do they need to bend or twist)?
- > do they kneel, crouch or crawl?
- > could they slip, trip or fall?
- > do they drive a vehicle?
- > are they exposed to vibrations or jarring?
- > do they climb up or down?
- > do they work at heights?
- > could anything fall on them?

Example

As part of carrying out a workplace risk assessment, Jane, a Wellington shopkeeper, looked around her workplace to identify hazards that could give rise to reasonably foreseeable risks to her workers or others in or near her shop.

She wondered whether the recently attached sign above her front door could be a hazard. She understood the importance of having signs well secured against the strong winds regularly experienced in the capital. As a poorly secured sign could be a hazard if it came loose, Jane decided to check whether her sign is well secured.

Example

Cut and Press Ltd (the PCBU) is a small business that cuts and presses metal sheeting for its customers. It has a large workshop with a separate office for its full-time administrator occupying a back corner of the workshop. There is one entrance at the front of the workshop.

The PCBU identified the hazards to its workshop workers while using the cutting and pressing equipment. The PCBU considered these were the only work hazards.

However the PCBU forgot to consider potential hazards during machine breakdowns, jams and maintenance. They also forgot to look at the wider workplace hazards such as those:

- > faced by the administrator, customers and other visitors (including the postman) when walking through the workshop to the back office
- > from couriers loading the finished products into transport vans through the front door.

STEP 2:

ASSESS

Think about the work risks most likely to occur and/or cause injury, illness, or death to workers or others.

Think about:

- > who might be exposed to the hazard
- > what could happen if the harm does occur (eg what severity of injuries or illnesses could result? Could people be killed?)
- > how likely could harm arising from the hazard occur (eg is it very likely, likely or unlikely under usual business conditions?).

Engage with your workers when assessing your risks.

Using this information, work out the risks to your workers and others at the workplace arising from your work. Then decide which risks you will deal with first.

Example

Jane, a Wellington shopkeeper, considered whether the recently attached sign above her front door presented a risk she needed to manage. A poorly secured sign could be dangerous to anyone near her shop in strong winds.

Jane found the sign was fixed to the building using bolts designed to withstand Wellington weather. Because of this Jane decided the sign did not currently present a risk. But if circumstances changed (eg Wellington began to experience stronger winds or the bolts started to age and weaken), she would relook at this.

STEP 3:

MANAGE

You should then decide how you will deal with these risks.

This step is split into three sub-steps:

- > Working out what options there are to manage the risk.
- > Deciding how you will manage the risk in a reasonably practicable way.
- > Recording how you are managing your risks.

WORK OUT WHAT OPTIONS THERE ARE TO MANAGE THE RISK

For certain risks specified in regulations

There are certain risks that must be dealt with in a certain way. These are specified in the health and safety regulations (see Table 1 below for examples).

For example, the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 describe certain risks which must be dealt with by PCBUs in a specified way – either by using a prescribed risk management process or having specific requirements listed in regulations.

REGULATIONS	COVERAGE
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016	Describes how to manage risks arising from young people and young workers, remote or isolated work, containers of liquids that pose a risk of drowning, atmospheres with the potential for fire and explosion, raised and falling objects, loose material in enclosed spaces and substances hazardous to health.
Health and Safety at Work (Asbestos) Regulations 2016	Describes how to handle work that deals with asbestos.
HSE Regulations 1995	Describes how to manage risks from hazards or activities such as noise and working at heights.
Health and Safety at Work (Hazardous Substances) Regulations 2016	Describes how to deal with work involving hazardous substances. <i>Note these regulations have not been made yet.</i>
Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016	Describes how to deal with mining and quarrying work.
Health and Safety at Work (Petroleum Exploration and Extraction) Regulations 2016	Describes how to deal with petroleum work.

Table 1: Examples of health and safety regulations and the work they cover

Check if the work risk you identified is one that has a specified way to deal with it within the regulations. If it is, you must follow these requirements.

For further information:

- > Go to the WorkSafe New Zealand website www.worksafe.govt.nz for information about health and safety regulations.

For other risks

If the risk is not one specified in regulations, the PCBU decides how to manage the risk. The only requirement is that the PCBU first try to eliminate the risk so far as is reasonably practicable. If a risk can't be eliminated it must be minimised so far as is reasonably practicable.

Risks can be eliminated or minimised using control measures (see Table 2 for examples of control measures).

You could decide what to do by using the following **hierarchy of controls** (see Figure 1).

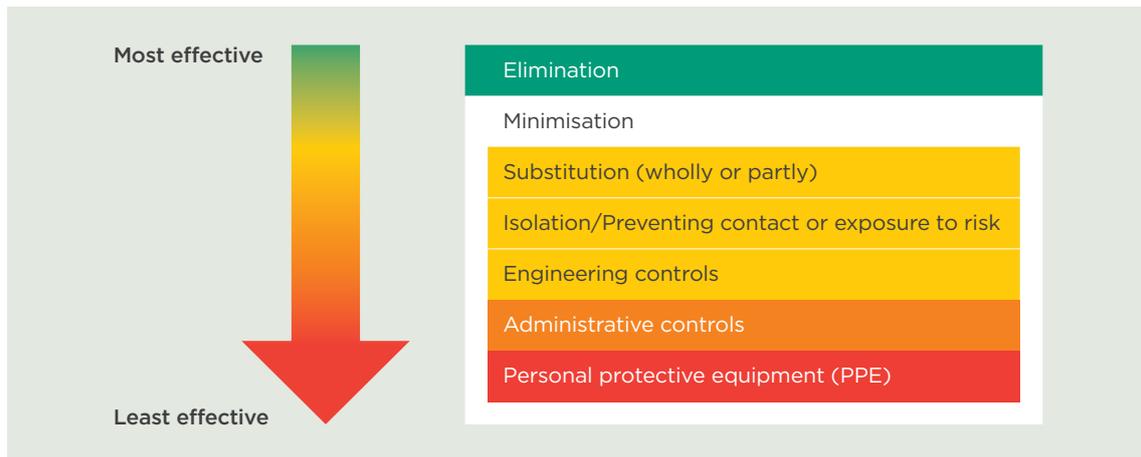


Figure 1: Hierarchy of controls

ACTION	WHAT IS THIS?	EXAMPLE
Eliminating	Avoiding the sources of harm (eg equipment, substances or work processes)	Removing a trip hazard or getting faulty equipment repaired.
Minimising	Substituting	Using a less hazardous thing, substance or work practice
	Isolating/ preventing contact or exposure to risk	<p>Separating people from the hazard/preventing people being exposed to the risk</p> <p>Marking the hazardous area, fitting screens or putting up safety barriers around the hazard for example:</p> <ul style="list-style-type: none"> > welding screens can be used to isolate welding operations from other workers > barriers and/or boundary lines to separate areas where forklifts operate near pedestrians in the workplace. <p>Using fully automated processes for example:</p> <ul style="list-style-type: none"> > using an automated arm to remove objects from degreasing baths > using fully automated spray booths that don't require any one to enter.

ACTION		WHAT IS THIS?	EXAMPLE
Minimising	Imposing engineering controls	Using physical control measures (eg mechanical devices or processes)	Modifying tools or equipment, or fitting guards to machinery. Using extraction ventilation to remove harmful substances.
	Imposing administrative controls	Using safe methods of work, processes or procedures designed to minimise risk	Requiring all people to walk only within the painted pedestrian zones when on the factory floor. Having emergency plans and evacuation procedures in place.
	Using personal protective equipment (PPE)	Using safety equipment to protect against harm. PPE acts by reducing exposure if an incident occurs	Using safety glasses, overalls, gloves, helmets, respiratory gear and ear muffs associated with jobs such as handling chemicals or working in a noisy environment.

Table 2: Examples of control measures

Using the hierarchy in Figure 1 above, the more effective control measures are used first where possible.

You can use more than one type of control measure at a time.

The control measures used should be proportionate to the risk.

Engage with your workers when making decisions about the ways to eliminate or minimise the risks.

Try to eliminate the risk

The first step is to try to eliminate the risk so far as is reasonably practicable. This can be done by removing the source of the harm (eg removing a trip hazard or faulty equipment).

If it is not reasonably practicable to eliminate the risk, you must minimise it so far as is reasonably practicable.

Minimise the risk

There are two ways a risk can be minimised (reduced) to an acceptable level.

You can:

- > reduce how serious the potential harm is if it does occur
- > reduce the chances of it occurring.

Check if the risk is well-known and if there are commonly accepted ways (eg industry standards) you could use to minimise the risk (common controls for common risks).

Need help?

Go to the WorkSafe website www.worksafe.govt.nz for guidance to help you to manage your work risks. There is a range of guidance documents (from fact sheets to Approved Codes of Practice) which provide advice on how to manage risks in industries including manufacturing, agriculture, construction and building, and forestry.

If you decide to use these well-known or common ways to minimise the risks, you don't need to use the hierarchy of controls above (go to *Recording how you are managing your risks*).

Example

Bob, an office manager, identified a guillotine used to cut and trim small piles of paper presented a risk to workers. He noted there was nothing in place to prevent fingers being cut when the guillotine blade was lowered.

After looking online, Bob found it was now standard for this kind of guillotine to have a blade guard or safety cover to manage this potential risk. After checking whether a blade guard could be easily installed on the guillotine, he decided to buy a new guillotine with the standard safety features.

If the risk is not well-known or there are no accepted ways to minimise it, first see if the risk can be reduced to an acceptable levels by:

- > substituting the high risk activity with a lower risk activity
- > isolating people from the hazard/preventing people being exposed to the risk
- > applying engineering control measures.

If a risk remains, see if there are administrative control measures that could be used.

Personal protective equipment (PPE) should only be used to minimise risk when other control measures can't adequately minimise the risk.

WorkSafe expects that preference will be given to those controls that protect multiple 'at risk' persons, so far as is reasonably practicable.

For further information:

- > Go to the WorkSafe website www.worksafe.govt.nz for information about PPE.

DECIDE HOW TO DEAL WITH THE RISK IN A REASONABLY PRACTICABLE WAY

With all the information gathered, decide what is reasonably practicable to do to manage the risk.

'Reasonably practicable' means what is or was reasonably able to be done to ensure health and safety taking into account and weighing up relevant matters including:

- > the likelihood of the hazard or the risk concerned occurring
- > the degree of harm that might result from the hazard or risk
- > what the person concerned knows, or ought reasonably to know, about:
 - the hazard or risk
 - ways of eliminating or minimising the risk
- > the availability and suitability of ways to eliminate or minimise the risk
- > after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

Need help?

Read the WorkSafe fact sheet *Reasonably practicable*.

As soon as possible after you have made a decision, you should:

- > deal with the risk (eg install engineering controls, put in place administrative controls or PPE, change work procedures, processes or equipment, document your safe work procedures, or make changes to the work environment or facilities)
- > ensure your workers know about the potential risks, what the control measures to manage the risks are and why it's important to use them, and how to apply them
- > review and update your emergency procedures/plan if needed.

Example

Joe runs a workshop with many noisy machines. He was concerned that his workers were being exposed to levels of machine noise that could permanently damage hearing.

Joe read in WorkSafe's *Approved Code of Practice for the Management of Noise in the Workplace* that the 8-hour average noise levels should stay below 85 decibels and workers shouldn't be exposed to peak noise levels of 140 decibels or greater.

An expert came in to check what noise workers were being exposed to throughout the workshop. The noise levels were higher than what was considered safe. This meant Joe's workers could develop noise induced hearing loss unless he did something about it.

Joe considered this was a health risk he needed to manage. He decided to develop a noise management plan to reduce his workers' exposure to the machine noise

Joe consulted his workers about how to reduce their exposure to the machine noise.

Joe also found guidance on the WorkSafe website.

Joe followed a good practice risk management process and applied the hierarchy of controls.

Eliminate machine noise

He first tried to eliminate the risk. As Joe needed machines to carry out the work he couldn't eliminate machine noise. As elimination was not practicable, Joe looked at minimising the risk.

Minimise machine noise

Where Joe could, he replaced machinery with quieter machines (substitution control).

Where Joe couldn't replace a machine he installed noise barriers and moved the machine to a separate room to reduce the amount of noise the workers were exposed to (isolation controls).

He ensured all workers knew about the health risks of excessive noise. He rotated jobs to reduce the number of workers exposed to machine noise and reduced the time workers were exposed to excessive noise (administrative controls).

Joe considered these actions were reasonably practicable, cost-effective and proportionate to the risk.

With the control measures in place, when in the machine room, workers were still exposed to unsafe noise levels. So based on the recommendation from the expert, Class 3 earmuffs were provided to be worn in the machine room. Workers were trained to correctly wear, maintain and store the earmuffs and Joe regularly checked that workers were using them properly.

RECORDING HOW YOU ARE MANAGING YOUR RISKS

While you can decide whether to keep written records or not, it is good practice to do so.

Written records mean you can more easily review how you are dealing with risks if something changes. You can also use these records to train your workers about work risks and the control measures put in place to manage them.

For low risk work, records can be simple. You could note the main points about the risks you identified and what you decided to do.

More risky work would require more complex records.

Example

Café owner Barb decided to write down in a table what potential harms she looked at, which she needed to manage and how she decided to manage them. Barb started to fill out the table below. Once finished, Barb kept this table attached to the wall by her desk, and reviewed and updated it on a regular basis.

POSSIBLE HARMS (INJURIES OR ILLNESSES)	THOUGHTS	ACTIONS
Kitchen work		
Sprains and breaks (from slips, trips or falls eg from split liquids including oil or grease on floors, non-secured electrical cords, obstacles in walkways)	These could happen due to the nature of food preparation and the use of electrical devices with cords. Staff could suffer injuries stopping them from working.	<ul style="list-style-type: none"> > Secure all electrical cords > Ensure walkways are kept clear > Remove unnecessary clutter > Check flooring for tear and, rips > Ensure all spills must be cleaned up as soon as they occur. > Ensure a warning sign is placed on floor areas while wet. > Ensure staff wear shoes with a good grip
Skin irritations or chemical burns (from using toxic substances eg cleaners)	This could happen as bleach is currently used to clean bench tops. A corrosive oven cleaner is also used. Staff could suffer injuries stopping them from working.	<ul style="list-style-type: none"> > Use less toxic cleaners where possible. > If corrosive cleaners need to be used, rubber gloves and safety glasses are provided for staff to use. Staff will follow the use instructions on the cleaner's container.
Allergic reactions (from staff handling food they are allergic to)	No staff have food allergies	Nothing at the moment but new staff will be asked about any known food allergies before starting work.
Sore backs or limbs (from lifting boxes, rubbish bags, appliances or cookware)		

For further information:

- > See WorkSafe's Good Practice Guidelines *Writing health and safety documents for your workplace.*

STEP 4:

MONITOR

Control measures should remain effective, be fit for purpose, be suitable for the nature and duration of the work, and be installed, set up and used correctly.

You should regularly check the way you are managing the risk and if you need to make changes. To do this, you should monitor and if needed, revise control measures.

For example, you should regularly:

- > check the control measures are correctly installed/set up and being used by workers
- > check the control measures are still working to manage the risk
- > monitor worker exposure and health (where relevant) to check your control measures are reducing worker exposure.

REVIEW FOR CONTINUOUS IMPROVEMENT

Workplaces change. You should review your work activities on an ongoing basis to identify new risks to be managed including when there is a change in the workplace or work eg:

- > new equipment
- > new or changed work processes
- > increased workload or extended working hours.

Look at what incidents have occurred to identify where control measures may be needed.

Example

In Joe's workplace, loud machinery noise causing noise induced hearing loss was identified as a health risk to workers.

Joe followed a good practice risk management process (see a previous example). He put in place control measures to reduce his workers' exposure to noise. Class 3 earmuffs were provided to workers to wear while they are in the machine room. To check the control measures were working, his workers' hearing was tested on a regular basis.

Now Joe's workshop have a big order to fill which will mean that workers will work extended shifts (over 8 hours) for 3 months. Joe knew that when workers are exposed to noise for greater than 8 hours, the levels of allowable noise decrease. So Joe checked whether the Class 3 earmuffs currently worn by workers would provide adequate hearing protection over the extended shifts. When Joe found out they wouldn't, he provided his workers with the increased hearing protection needed. He also reassessed his noise management plan to check that it was still appropriate under the changed work conditions, and if there were other controls he could put in place.

FURTHER HELP

WorkSafe produces a range of information and guidance to help people to comply with their health and safety duties including tools to help with managing common risks.

For help with risk management, go to the WorkSafe website www.worksafe.govt.nz/hswa.

PUBLISHED: APRIL 2016. CURRENT UNTIL REVIEW IN 2018.