HSWA

HEALTH & SAFETY AT WORK ACT

# Identifying, assessing and managing work risks

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WORKPLACE RISKS AND CONTROLS

New Zealand Government

WORKSAFE
NEW ZEALAND | MAHI HAUMARU AOTEAROA

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# 1.0 Introduction

## Managing work risks

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

Under the Health and Safety at Work Act 2015, 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.

> '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 risk concerned occurring or workers being exposed to the hazard
> – the degree of harm that might result
> – 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.
>
> For more guidance read WorkSafe's fact sheet *Reasonably Practicable*.

Risk management is not just hazard spotting. Risk management involves identifying and then assessing which work risks to deal with first (eg risks with potentially significant consequences such as chronic ill-health, serious injury or death, or those with a high likelihood of occurring).

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. It is designed to give PCBUs who need help a starting point.

The management of risk needs to be appropriate/proportionate for the scale of the risk. This means risks with potentially significant consequences (eg chronic ill-health, serious injury, death) may require more effort and resources to determine the most effective way to eliminate/minimise the risk.

This guide is an update to the fact sheet *A Way to Identify, Assess and Manage Work Risks*. See WorkSafe's fact sheet *How to Manage Work Risks* for a simplified version of the process described in this guidance.

## Involving workers

You must involve your workers and their representatives in work health and safety.

You have two duties:

– to engage with your workers on health and safety matters that may directly affect them, so far as is reasonably practicable
– to have practices that give your workers reasonable opportunities to participate effectively in improving health and safety on an ongoing basis (these are known as worker participation practices).

A healthy and safe workplace is more easily achieved when everyone involved in the work communicates with each other to identify hazards and risks, talks about any health and safety concerns and works together to find solutions.

Seek the views of your workers and their representatives as you work out how to deal with your work risks. They can provide technical and operational knowledge on identifying, assessing and eliminating/minimising risks. To get objective, detailed and comprehensive feedback, involve workers with a range of knowledge and experience.

For further information about worker engagement and participation, go to WorkSafe's website: www.worksafe.govt.nz

## Working with other PCBUs

Businesses that work together will likely share health and safety duties in relation to the same matters. These are known as overlapping duties. Duties can overlap in a shared workplace (eg a shopping centre or a port), where more than one business and its workers control and influence the work on site. Duties can also overlap in a contracting chain, where contractors and subcontractors provide services to a head contractor or client and don't necessarily share the same workplace.

You must, so far as is reasonably practicable, consult, cooperate and coordinate activities with all other PCBUs you share overlapping duties with. Such duties may include managing risks in shared workplaces or activities.

### Example

If you have equipment installed at a commercial client's premises that your workers regularly service, there are risks that arise from your workers servicing the equipment and risks your workers are exposed to while working at the premises. You need to work with the client to ensure the risks are adequately managed.

For further help, read WorkSafe's quick guide *Overlapping Duties*.

## Overview of a risk management process

WorkSafe encourages PCBUs to use the PLAN-DO-CHECK-ACT approach to assess, manage and monitor work risks.

**4**

## ACT
### Take action on lessons learnt

- Regularly review the effectiveness of control measures at scheduled periods.
- Review incidents or near misses and talk to your workers to check that the control measures are effectively eliminating/minimising work risks.
- Use the results of your reviews, investigations into incidents or near misses, and monitoring results to continuously improve control measures.

**1**

## PLAN
### Assess risk and identify control measures

- Identify hazards that could give rise to work-related health and safety risks.
- Assess work risks to decide which risks to deal with, and in what order.
- You must eliminate or minimise risks so far as is reasonably practicable.
- Engage with your workers and their representatives when identifying and assessing risk, and when making decisions about the ways to eliminate or minimise the risks.

**3**

## CHECK
### Monitor performance of control measures

- Implement appropriate means for workers to report incidents, near misses or health and safety concerns.
- Monitor workplace conditions and worker health so far as is reasonably practicable.
- Engage with your workers and their representatives when making decisions about procedures for monitoring.

**2**

## DO
### Implement control measures

- Implement control measures that effectively eliminate or minimise the risk.
- Give preference to control measures that protect multiple at-risk workers at the same time.
- Personal protective equipment (PPE) should not be the first or only control measure considered.

**FIGURE 1:** The PLAN-DO-CHECK-ACT approach

These steps are described more fully in the following sections.

# 2.0
# Plan: assess risk and identify control measures

**Identifying hazards that could give rise to work health and safety risks**

Thinking about your work activities with your workers, identify what could harm the health or endanger the safety of one or more workers or others (eg visitors, bystanders). As shown in Figure 2, this harm can:

– be acute – occurs immediately (eg a burn from a splash of a corrosive substance) and/or

– be chronic – occurs slowly over a long period of time (eg cancer due to exposure to a carcinogen) and/or

– be catastrophic – low frequency, high consequence (eg major industrial, workplace or transport incidents such as a large explosion).
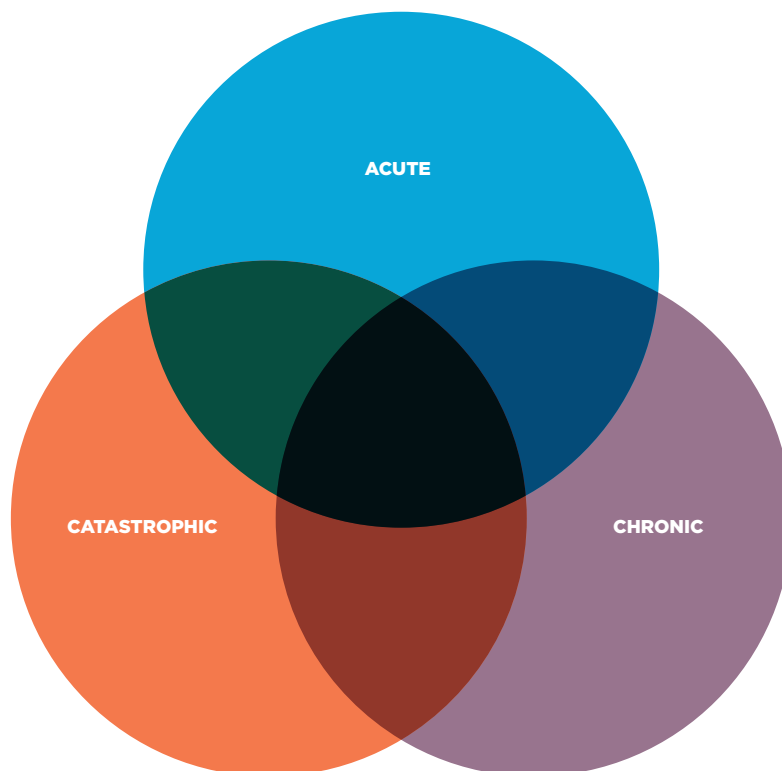


**FIGURE 2:**
Types of risk

As it can be hard to appreciate the range of health risks, the following information on work-related health has been included.

## Background to work-related health

Work has the potential to harm a person's health, and a person's health can affect safety at work. Figure 3 shows examples of work-related health risks and health-related safety risks.

Incapacity risks

Impairment risks

Effects of health on work

Mobility risks

Sensory risks

Two-way relationship

Biological risks

Psychosocial risks

Effects of work on health

Physical risks

Chemical risks

Ergonomic risks
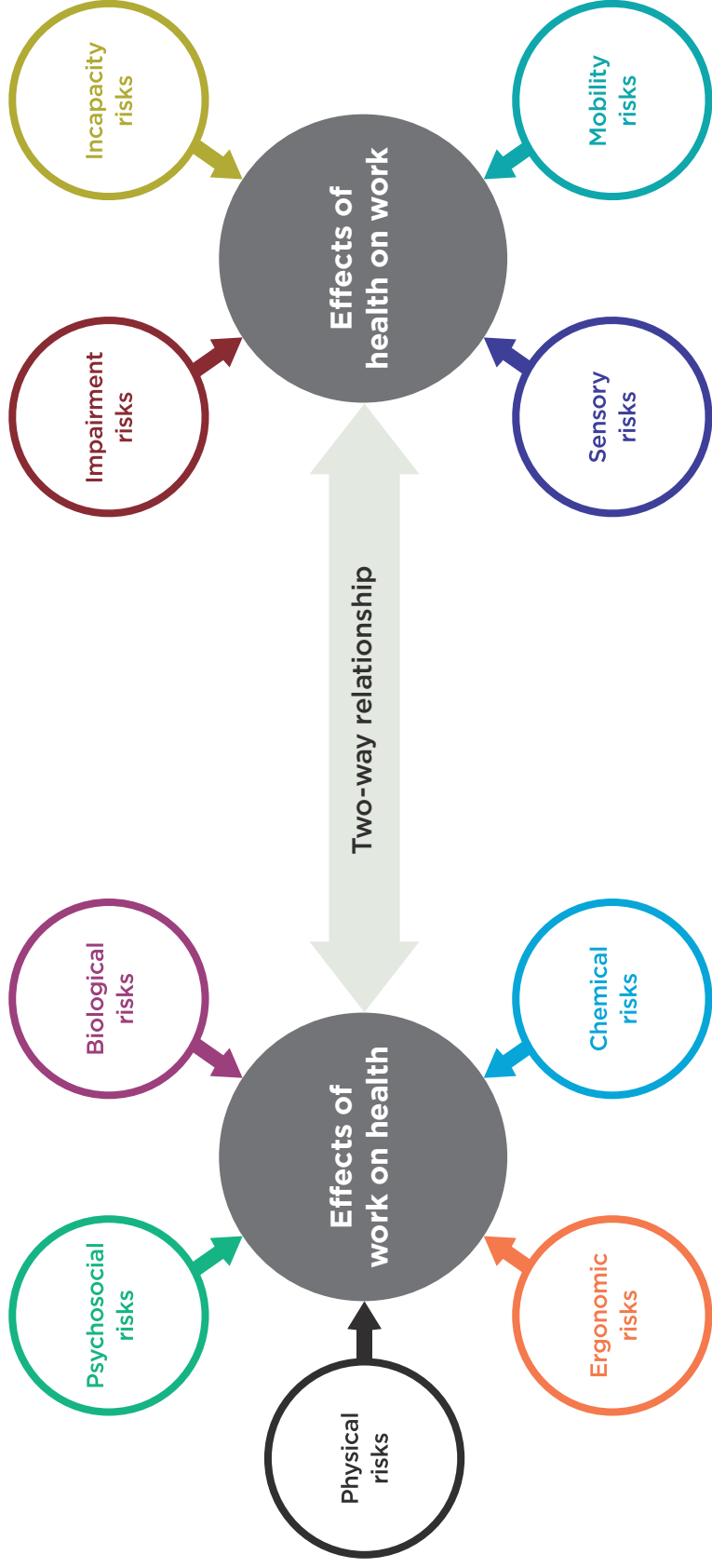
**WORK-RELATED HEALTH RISKS ('EFFECTS OF WORK ON HEALTH')**

| Biological risks | Chemical risks | Ergonomic risks | Physical risks | Psychosocial risks |
|---|---|---|---|---|
| Blood borne viruses (eg Hep C) | Asbestos | Manual handling | Noise | Bullying and work behaviours |
| Animal bacteria (eg Leptospira) | Solvents | Shift work | Vibration | Excessive workload |
| Bacterial infection | Pesticides | Job design | UV radiation (eg sun exposure) | Lack of autonomy |

**HEALTH-RELATED SAFETY RISKS* ('EFFECTS OF HEALTH ON WORK')**

| Impairment risks | Incapacity risks | Mobility risks | Sensory risks |
|---|---|---|---|
| Fatigue | Poorly controlled diabetes | Physical frailty | Colour vision deficiency |
| Stress or mental distraction | Poorly controlled heart disease | Bone and/or joint conditions | Reduced visual acuity |
| Drugs/alcohol consumption | Poorly controlled high blood pressure | Severe obesity | Reduced hearing capability |

**FIGURE 3:** Examples of work-related health risks and health-related safety risks

* Health-related safety risks are specific to the tasks, situation and work environment that they exist within and are not a risk in all circumstances.

## What to look at when identifying hazards

Think about your workplace, your wider work environment (outside your immediate physical environment), and work processes when considering health and safety of workers or others.

Consider if you have at-risk workers (eg young people, pregnant women or workers with impaired mobility) or if your work can affect at-risk people beyond your immediate workplace.

Look at the following areas:
– physical (eg noise, vibration)
– biological (eg bacterial infections)
– chemical (eg asbestos, lead)
– ergonomic (eg manual handling)
– psychosocial (including bullying, tight deadlines and other stress factors).

Look at:
– your work processes (eg what harmful substance you use or could be generated), plant, (eg vehicles, machinery, and equipment) and structures (eg buildings):
  - during 'business as usual'
  - during different shifts
  - during the cleaning, repair or maintenance of machines
  - during the clearing of jammed machines
  - for 'non-business as usual' events such as shutdowns
– the workplace itself (eg lighting, ventilation)
– your wider work environment (outside your immediate workplace)
– any emergencies or unexpected events that have occurred
– worker behaviour including possible intentional misuse of equipment.

Seek the views of your workers and their representatives when identifying hazards. Your workers will have operational day-to-day knowledge that will be invaluable when identifying hazards.

**Hint**

When considering the 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?
- could they be exposed to harmful substances?
- do they work with sharp machinery or tools?
- how long are their working hours?

**Example**

As part of carrying out a work risk assessment, Jane, a shopkeeper, and her assistant looked around to identify hazards that could give rise to reasonably foreseeable risks to workers or others in or near the shop (eg customers, people walking past the shop, and visitors to the public playground located behind the shop).

Inside the shop they identified the shop's shelving as a hazard.

**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, with input from workers, identified work hazards while using the cutting and pressing equipment. The PCBU considered these were the only work hazards.

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

- faced by the administrator, customers and other visitors (including the postie) when walking through the workshop to the back office
- faced by members of the public when trucks reverse out of the workshop over the footpath and onto the street
- faced by their clients when workers install products at the client's premises.

## Assessing risks

To identify and assess the risks arising from your work hazards think about:

– who might be exposed to the hazard

– what the potential consequences of exposure to the hazard are (eg what severity of injuries or ill-health could result? Could people be killed or develop long-term health issues?)

– how likely the consequences are (eg very likely, likely or unlikely under usual business conditions).[1]

### Hint

When working out what the consequences are, you could ask yourself:

– what injuries/ill-health could occur?

– what could influence how severe the injuries/ill-health are? (eg the distance that a worker may fall influences how bad their injuries could be)

– who could be harmed? (eg workers or people outside the immediate workplace? A single person, or many?)

– could a small incident escalate to a more serious one? (eg could a minor fire become a widespread blaze?)

When working out how likely the consequences are, you could ask yourself:

– how often is the work carried out?

– who is exposed to the hazard? How often is the exposure and for how long?

– how effective are your current control measures at minimising the risk?

– have the injuries/ill-health resulted from your work or occurred elsewhere? If so, how often?

– do you experience changes in work demand that could affect likelihood? (eg do you have increased work demands during the pre-Christmas period?)

– could a change in environmental conditions (eg heavy rain) affect likelihood?

– do you have workers (such as new or unexperienced ones, those with different languages or cultures) that may affect the chances of harm occurring?

Adapted from Safe Work Australia's Code of Practice *How to Manage Work Health and Safety Risks*.

Seek the views of your workers and their representatives when assessing work risks. Your workers will have operational day-to-day knowledge that will be invaluable when assessing work risks.

Using the above information, decide which work risks you need to deal with. Then decide which risks you will deal with first (eg risks with potentially significant consequences such as chronic ill-health, serious injury or death, or those with a high likelihood of occurring).

### Example

Jane had identified her shop's shelving as a health and safety hazard (see the example on page 8). Jane then assessed whether the shelving presented a risk she needed to manage.

Jane had regularly seen children climb onto shelves to reach high items. A child could be seriously hurt if they climbed up the shelving and fell off, or if poorly secured shelving collapsed under the child's weight. Jane concluded that she needed to manage the risks to her customers arising from the shelving.

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[1] Bear in mind that it can be difficult to accurately judge the likelihood of harm from many health risks and it's often under-estimated.

## Working out how to deal with the risk

### Work out what your options are

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 (eg a hierarchy of controls) or putting in place the technical requirements listed in regulations.

| REGULATIONS | COVERAGE |
|---|---|
| Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 | Describe 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 | Describe how to manage the risks from work that deals with asbestos. |
| HSE Regulations 1995 | Describe how to manage risks from hazards or activities such as noise and working at heights. |
| Health and Safety at Work (Hazardous Substances) Regulations 2017 | Describe how to manage the risks from work involving hazardous substances. |
| Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016 | Describe how to manage the risks from mining and quarrying work. |
| Health and Safety at Work (Petroleum Exploration and Extraction) Regulations 2016 | Describe how to manage the risks from petroleum work. |

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

For further information:
– go to the WorkSafe New Zealand website: www.worksafe.govt.nz
  for information about health and safety regulations.

Check if the work risk you identified has a specified way to deal with it outlined in regulations. If it does, you must follow these requirements.

Where regulations also require you to use a hierarchy of controls to manage risk in addition to imposing specified technical requirements (such as the hazardous substances regulations), we suggest the following approach:

– put in place the technical requirements in the regulations

– with these in place, see if there are any risks that you still need to manage

– use the hierarchy of controls to determine the control measures to use to eliminate/minimise the risk (see page 13).

If the risk is not one specified in regulations, you decide how to manage the risk. You must 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.

Seek the views of your workers and their representatives when making decisions about the ways to eliminate or minimise risk. They may be able to suggest practical cost-effective solutions, or identify the pros and cons of different options.

## Types of control measures

Table 2 provides examples of the different types of control measures you can use to eliminate or minimise risk.

| | ACTION | WHAT IS THIS? | EXAMPLE |
|---|---|---|---|
| | Eliminating | Removing the sources of harm (eg equipment, substances or work processes). | Removing a trip risk or getting faulty equipment repaired. Prefabrication of components to eliminate cutting (to eliminate risks from airborne contaminants, vibrations and noise). Using non-toxic glue instead of a toxic glue. Using water-based paint instead of solvent-based paint. |
| Minimising | Substituting | Substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk (eg using a less hazardous thing, substance or work practice). | Buying quiet plant, equipment and vehicles. Using methods that produce less vibration (eg using a cut off saw instead of an angle grinder). |
| | Isolating/ preventing contact | Isolating the hazard giving rise to the risk to prevent any person coming into contact with it (eg by separating people from the hazard/preventing people being exposed to it). Isolation focuses on boxing in the hazard or boxing in people to keep them away from the hazard. | Fitting screens or putting up safety barriers around the hazard for example: <br> – welding screens to isolate welding operations from other workers <br> – barriers and/or boundary lines to separate areas where forklifts operate near pedestrians. <br> Using fully automated processes, for example: <br> – an automated arm to remove objects from degreasing baths <br> – fully automated spray booths that don't require anyone to enter. |
| | Using engineering control measures | Using physical control measures including mechanical devices or processes. | Modifying tools or equipment, or fitting guards to machinery. Using extraction ventilation to remove harmful substances. |
| Minimising | Using administrative control measures | Using safe methods of work, processes or procedures designed to minimise risk. It does not include an engineering control measure, or the wearing or use of personal protective equipment. | Requiring all people to walk only within the painted pedestrian zones when on the factory floor. Having emergency plans and evacuation procedures in place. Having exclusion zones so workers don't unnecessarily go near noisy or dangerous equipment or tasks. |
| | Using personal protective equipment (PPE) | Using safety equipment to protect against harm. PPE acts by reducing exposure to, or contact with, the hazard. | Using safety glasses, overalls, gloves, helmets, respiratory gear and ear muffs associated with jobs such as handling chemicals or working in a noisy environment. PPE is the least effective type of control and should not be the first or only control measure considered. |

**TABLE 2:** Examples of control measures

## Eliminating or minimising 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.

There are two ways a risk can be minimised (reduced).

You can:

– reduce how serious consequences are if it does occur or if a worker is exposed to the hazard

– reduce the chances of it occurring or a worker being exposed to the hazard.

Check if there are widely used control measures (eg industry standards) for that risk. However, just because something is a common practice doesn't mean that it's the most reasonably practicable option. You should focus on the most effective control measures. So before considering applying a widely used control measure, consider whether it will be effective in managing the risk in your situation (eg when working at height, will using mobile work platforms, rather than step ladders, more effectively minimise the risk?).

You may need to use multiple control measures to adequately deal with a given risk. For example, to minimise the risk to workers from passing vehicles at a roadwork site, you may need isolation control measures (eg barriers to direct traffic away from workers), administrative control measures (eg warning signs) and PPE (eg high visibility gear for workers).

**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.

## Using the hierarchy of controls to choose the most effective control measures

You can use the hierarchy of controls (Figure 4) to help you to work out the most effective control measures so far as is reasonably practicable.
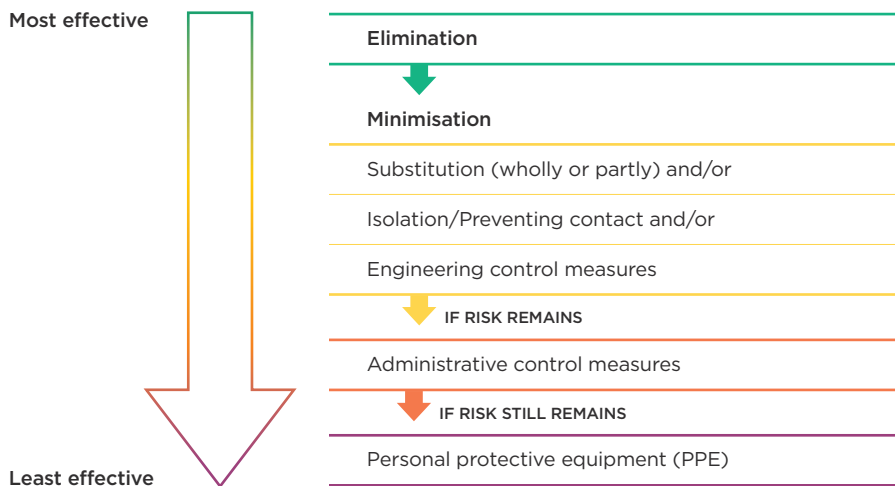
**FIGURE 4:**
Hierarchy of controls

The first step is to try to eliminate the risk. If this is not reasonably practicable to do, this risk is minimised so far as is reasonably practicable.

When using the hierarchy of controls to minimise risk, you first take one or more of the following actions that are the most appropriate and effective, taking into account the nature of the risk:

– substituting with a lower risk activity or substance

– isolating the hazard/preventing people from coming into contact with it

– applying engineering control measures.

If, after applying these higher order control measures a risk remains, you minimise this by putting in place administrative control measures.

Finally, if a risk still remains, you minimise the remaining risk by ensuring the provision and use of suitable personal protective equipment (PPE).

PPE is only used when other control measures alone can't adequately manage the risk. PPE should not be the first or only control measure considered and WorkSafe expects you to give preference to other control measures that protect multiple at-risk workers at once.

For further information about PPE:

– Go to WorkSafe's interpretive guidelines *General Risk and Workplace Management – Requirements for workplaces and facilities, information, training, instruction and supervision, personal protective equipment, monitoring, first aid, emergency plans and young people*.

## Dealing with residual risk

There can still be risks even after you implement your chosen control measures. Control measures themselves may introduce risks (eg using hearing protection means workers may not hear approaching vehicles). These risks must also be eliminated or minimised, so far as is reasonably practicable. You can also use the hierarchy of controls to deal with these risks.

## 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.

**Need help?**

See page 2 of this quick guide or read WorkSafe's fact sheet *Reasonably Practicable*.

## Recording how you are managing your risks

It is good practice to keep written records of how you are managing your risks.

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 will require more complex records.

**Example**

Café owner Barb, with input from her workers, decided to make a table of her work hazards, the potential harms that could occur and the likelihood of them occurring (the potential work risks), and what control measures and monitoring she put in place to deal with 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.

| HAZARD | POTENTIAL HARM | LIKELIHOOD | CONTROL MEASURES | MONITORING/ACTIONS | RESPONSIBILITY |
|---|---|---|---|---|---|
| Slippery floors | Sprains/ strains and fractures to arms. | *Likely* due to grease from food preparation. | – Floors cleaned with detergent daily.<br>– Spills must be cleaned up immediately.<br>– Wet floor signs to be placed at entry when floors are wet.<br>– Kitchen staff to wear appropriate shoes for kitchen (with grip). | Morning checks for kitchen cleanliness.<br>Observe for appropriate footwear. No exceptions! | Barb to check footwear and general kitchen cleanliness.<br>All staff have responsibility for spills and wet floor signage. |
| Tripping | Sprains/ strains and fractures to arms. | *Possible* due to the number of appliances used in food preparation and the layout of the kitchen. | – Install power outlets above each work surface.<br>– Impose a "No leads on floor rule".<br>– Remove unnecessary clutter.<br>– Ensure walkways are kept clear.<br>– Maintain the floor in sound condition. | Morning checks for tidiness.<br>Allocate one hour every Friday for general tidy-up.<br>Inspect floor condition during weekly tidy-up.<br>**Action:** Barb to engage electrician to install more power outlets by Sep 2017. Until then, leads should follow the line of the work surface and not cross the main access way. | Barb to ensure that time is allocated.<br>All staff must ensure the area is tidy and that leads do not cross the floor of the kitchen. |
| Use of chemical cleaning products | Chemical burns/ skin irritation resulting from skin contact or ingestion. | *Likely* due to quantities stored and frequency of use. | – Store washing soda and bleach products in a secure cabinet.<br>– Only use concentrated washing soda to clean floors and the stainless steel bench when dishwashing detergent and water will not shift the grease.<br>– Do not handle washing soda until wearing rubber gloves and safety glasses. | Observation.<br>Staff should remind each other of the required control measures.<br>PPE to be checked weekly. | Barb to ensure PPE is in good condition. |
| Handling certain foods | Allergic reaction of staff to certain food products. | *Rare:* Current staff do not have known allergies. | – Include allergy health question in employment procedures.<br>– Design controls as needed if a new staff member has a known allergy. | **Action:** Barb to amend employment checklist by Oct 2017. | Barb to use revised employment checklist and develop targeted control measures as needed. |

For further information see WorkSafe's good practice guidelines *Writing Health and Safety Documents for Your Workplace.*

# 3.0
# Do: implement control measures

As soon as possible after you have made a decision as to what the most effective control measures are, you should:

– implement the control measures (eg install engineering control measures, put in place administrative control measures or PPE, change work procedures, processes or equipment, document your safe work procedures, and/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.

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**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 guidance 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 realised noise 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.

To identify the options available for reducing noise, John talked to his noise expert, read the guidance on the WorkSafe website and consulted with his workers as to what would work best and whether there were other things he hadn't thought of that could be done. Joe then followed a good practice risk management process and applied the hierarchy of controls.

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.

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

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 control measures).

Where he could, Joe fitted silencers on compressed air exhausts to reduce the noise made by machines (engineering control measure).

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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 control measures).

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

However, even with the control measures in place, workers were still exposed to unsafe noise levels inside the machine room. 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.

# 4.0
# Check: monitor performance of control measures

Control measures should remain effective, be fit-for-purpose, be suitable for the nature and duration of the work, and be implemented by workers correctly.

Monitoring the performance of control measures will show you if your control measures are working effectively.

---

**Example**

Anne put a buzzer at the customer service counter so her workers could summon help if a client started behaving aggressively. To make sure this was effective, Anne organised a trial of the buzzer every three months to make sure it worked and that everyone knew what to do if the buzzer sounded.

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You should:

– implement the appropriate means for workers to report incidents, near misses, or health and safety concerns

– encourage appropriate reporting – avoid processes that may encourage under-reporting.

You must monitor workplace conditions and worker health so far as is reasonably practicable.

Monitoring can show you if your control measures are working effectively to reduce worker exposure:

– Exposure monitoring can be used to find out if workers are potentially being exposed to a hazard at harmful levels.

– Health monitoring is a way to check if the health of workers is being harmed from exposure to hazards while carrying out work, and aims to detect early signs of ill-health or disease.

Seek the views of your workers and their representatives when making decisions about procedures for monitoring.

The findings of the monitoring are used in the following 'ACT' step to ensure the control measures in place are continually improved.

**Example**

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

Joe followed a good practice risk management process (see the example on pages 16-17). 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. Joe regularly checked that workers were wearing hearing protection and were maintaining and storing it correctly.

Joe understood that he must monitor workplace conditions and worker health so far as is reasonably practicable.

He decided that it was reasonably practicable for workers to undergo regular hearing tests. He also organised the expert to regularly re-check the noise all workers were being exposed to to detect any increases above the expected level.

# 5.0
# Act: take action on lessons learnt

You should regularly review the effectiveness of your control measures at scheduled times. All policies, processes and systems should have a regular review date and a review/audit process to check that they're being followed and are still fit-for-purpose.

Investigate incidents and near misses to identify their causes and what you need to change to prevent them from happening again.

Talk to your workers on an ongoing basis to check if the control measures are effectively eliminating/minimising work risks.

Use the results of your ongoing worker conversations, reviews/audits, investigations and workplace/worker health monitoring to help you to continually improve the effectiveness of the control measures.

> **Example**
>
> Wiremu badly cut his hand on an angle grinder. Wiremu's PCBU appointed Caroline to investigate the accident. Caroline looked at the machine, the task being carried out, Wiremu's training and experience, and the hours worked when the accident happened.
>
> Caroline identified the cause of the accident. She told the PCBU how the existing control measures could be improved and what new control measures were required to prevent the accident occurring again.
>
> The PCBU agreed with the suggested changes and put in place the new and improved control measures. The PCBU then asked for a regular update about how these control measures were working.

# 6.0 Management of change

Workplaces and work change. You should review your work activities when there is a change in the workplace or work, for example:

– new equipment

– new or changed work processes

– increased workload, extended working hours or additional/changed shifts.

**Example**

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

Joe followed a good practice risk management process (see the example on pages 16-17). 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.

Now Joe's workshop has a big order to fill which will mean that workers will work extended shifts (over eight hours) for three months. Joe knew that when workers are exposed to noise for greater than eight 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 see if there were other control measures he could put in place.

# 7.0
# Further help

We have a wide range of resources available on topics including:

– adventure activities

– agriculture

– construction and building

– energy safety

– extractives

– forestry

– geothermal

– hazardous substances

– the Health and Safety at Work Act and regulations

– major hazard facilities

– manufacturing

– petroleum

– risk management

– work-related health (eg noise, silica, solvents, asbestos).

We also have a range of interactive tools, animated videos, quizzes, toolkits, case studies, templates and forms.

Go to the WorkSafe website: www.worksafe.govt.nz for these resources and other information.