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| Fire Safety Induction Program  Participant manual |
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# Program overview

Department of Health

## Introduction

This program has been developed to provide Department Health and Human Service’s staff with instruction and information on emergency procedures, fire safety, portable fire attack equipment and fire prevention.

After completing this program, you will understand:

* basic fire prevention and safety strategies
* the procedures to be followed during any emergency evacuation
* how to identify and use a portable dry chemical powder extinguisher and a fire blanket, and
* the use of smoke alarms or smoke detectors and sprinkler systems installed in 24 hour supported residential facilities owned, operated or funded by the Department of Health and Human Services.

## Fire safety skills maintenance

This model outlines the required process to ensure compliance and safety maintenance for both clients and staff.

To ensure the ongoing maintenance of fire safety skills, all staff are required to compete the following tasks.

* Fire safety [orientation checklist](https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation) <https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation> (on their first shift at a new location)
* [Weekly Fire Safety](https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation) < https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation> equipment check - this checklist needs to be completed by every staff member (apart from casual staff) at least once every 12 months.
* Participate in an [evacuation exercise](https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation) < https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation> - must be performed either during the day and/or at night, so that every staff member participates in at least 1 exercise per year (once with 12 months). The exercise may be conducted as table-top, tactical or field exercises. Casual staff are excluded from this exercise, however may participate at any time.

This information needs to be monitored and recorded by your organisition in order to demonstrate compliance when required.

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# Fire awareness

In this part of the program we look at the general fire awareness that’s required to reduce the likelihood of fires occurring, which includes why fires occur, extinguishing methods and how a fire spreads.

## Why fires occur

There are four major reasons why fires occur.

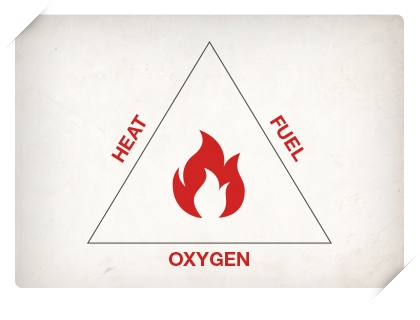
These are:

* **apathy** - having the ‘I’m all right or ‘it’s not going to happen to me’ attitude
* **ignorance** - not knowing what causes fires or not knowing how to use fire safety. Fire hazards and fire prevention has often not been taught
* **carelessness** - not paying attention to little safety details. Negligence and recklessness with things they know are dangerous, and
* **arson** - lighting fires intentionally for various reasons.

## Fire triangle

A fire may be defined simply as a chemical reaction accompanied by light, heat and smoke.

For a fire to occur, 3 basic elements are necessary. These are heat, fuel and oxygen, which is generally contained in the air. Without one of these elements, combustion cannot occur.



## Extinguishing methods

Removing one or more sides of the fire triangle causes combustion to cease, and the fire to go out.

### Cooling

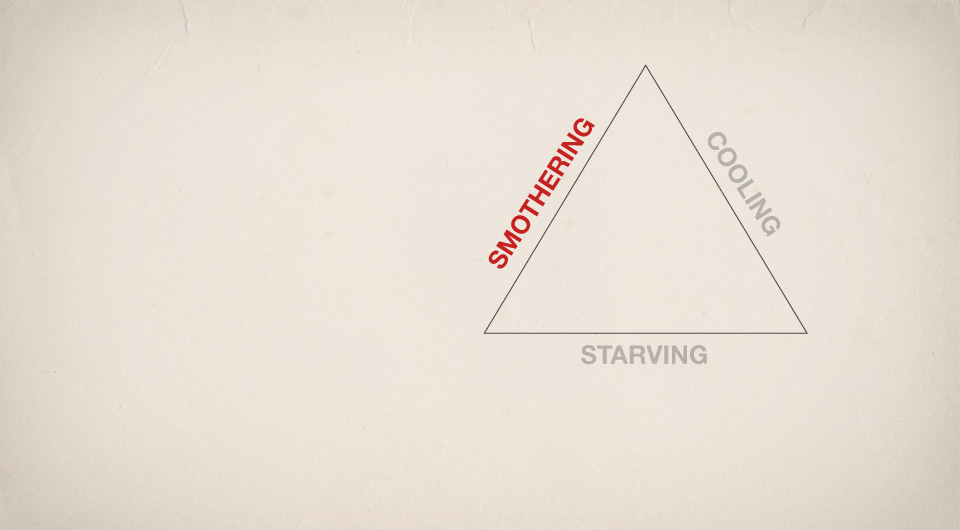
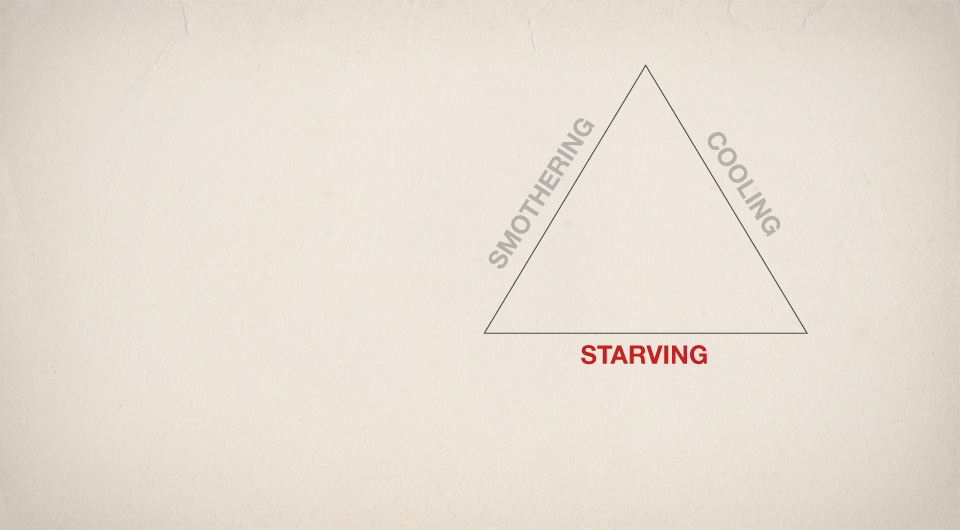
Cooling involves reducing the temperature of combustible material so that it falls below its ‘ignition point’. The best medium for this purpose is usually water. However, water is not always the most appropriate medium. It would be inappropriate in an electrical fire as it conducts electricity and can lead to electrocution.

### Starving

Starving involves removing the combustible material or fuel itself, for example turning off the gas.

### Smothering

Smothering involves excluding all or part of the oxygen, for example application of a dry powder chemical extinguisher or fire blanket. When oxygen is excluded from the fire, the fire is unable to maintain combustion.



## How a fire spreads

### Convection

Convection is the transmission of heat, not flames, within a liquid or a gas. As the liquid or gas is heated, it expands and becomes lighter thus rising and being replaced by the heavier liquid or gas. Therefore, in a high-rise building fire, these superheated gases rise up vertical shafts and spread to upper floors. Ignition is caused when the rising gases exceed their ignition temperature as they reach the upper areas.

### Conduction

Conduction is the transmission of heat through a material. For example, heat may be transmitted through steel roller doors and ignite combustible materials on the other side.

### Radiation

Radiation is the transmission of heat travelling through space until the heat waves are absorbed by other surfaces or materials. An example is when radiated heat from a burning building ignites combustible materials some distance away.

### Direct burning

Direct burning occurs when flames make contact with a fuel and the fuel ignites.

## Assessment: fire awareness

You should now have a good understanding about fire awareness.

Before we move on, you'll need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

Mark the correct answer with ‘X’

**What are the three elements required for a fire to occur?**

|  |  |
| --- | --- |
| Flames, oxygen and combustion |  |
| Heat, combustion and oxygen |  |
| Heat, fuel and oxygen |  |

**What are the four main reasons why fires occur?**

|  |  |
| --- | --- |
| Neglect, ignorance, bad housekeeping and revenge |  |
| Apathy, ignorance, carelessness and arson |  |
| Ignorance, arson, reward and stupidity |  |
| Neglect, bad housekeeping, reward and stupidity |  |

**What are the three ways to extinguish a fire?**

|  |  |
| --- | --- |
| Cooling, starving and smothering |  |
| Smothering, dampening and extinguishing |  |
| Covering, wetting and extinguishing |  |

# Fire prevention

Each staff member working in a 24-hour residential facility has a responsibility for fire prevention.

Fire prevention is the result of strategies and services to reduce the frequency of emergency incidents or to lessen their effects. To understand it we need to look at:

* hazardous areas
* fire risk behaviour
* room escape routes
* the dangers of heat and smoke
* the weekly fire safety checklist
* reporting fires, and
* debriefing.

## Housekeeping

Each staff member working in a 24-hour residential facility has a responsibility for fire prevention. To prevent fires, you must be aware of fire hazards and then do something about them. Sometimes you can rectify these hazards yourself, if you are authorised to, and at other times you need to report them to your supervisor so that they can be rectified by qualified tradespeople. For example, registered electrical contractors can be used for electrical problems.

## Hazardous areas: Internal

When you discover any fire safety problems it is vital that you take the appropriate fire safety steps. This is especially true when these problems affect those with a disability.

Make it part of your housekeeping to regularly remove unwanted materials, such as papers from the home, and conduct weekly fire safety checks.

## Kitchen

The kitchen area is the most likely place for a fire to occur. When cooking, never leave the stove or cooking appliance unattended. Fires in the kitchen are generally caused by unattended cooking. If, for some reason, you must leave the kitchen and are not able to turn off the cooking appliances you’re using, take an item with you such as a wooden spoon or tea towel to remind yourself that you have something cooking. Turn the stove or oven off when undertaking a difficult task.

Fire reports indicate that 33% of fires occur in the kitchen.

Overheating of foodstuffs is the most common cause of kitchen fires.

### Reducing the chance of a kitchen fire

To reduce the chance of a kitchen fire:

* when cooking, turn pot and saucepan handles inward towards the wall. This reduces the likelihood of them being knocked over and the contents scalding or burning people
* keep curtains and other combustible items away from stoves or cook-tops
* never hang tea towels or oven gloves on door handles of stoves
* clean grease and dust from the fan and filter of range hoods
* clean cooking oil and fats from around stoves and surrounding areas, and
* never use water on fat or cooking oil fires.

### Minimum equipment

The minimum requirements for portable fire extinguishing equipment in the kitchen are:

* a 2.1kg 2A 2O (E) dry chemical powder fire extinguisher (AS/NZS1841.5), and
* a fire blanket (AS/NZS3504).

These items should be in the kitchen by the exit door, away from the stovetop and in accordance with Australian Standards (AS2444).

## Activity: Hazardous area: Kitchen

**In this activity you’ll need to identify the correct ways to prevent fires in the kitchen.**

Please mark with an ’x’.

|  |  |
| --- | --- |
| Clean oils and fats from around stove |  |
| Keep curtains and other combustible items away from the stove |  |
| Put water on fat or cooking oil fires |  |
| Keep range hoods clean |  |
| Keep tea-towels and oven gloves on the stove door handle |  |
| Turn handles of pots and saucepans on the stove inwards |  |

## Bedroom

Fires in bedrooms are caused by many factors. The most common are faulty electrical appliances, smoking in bed and overloaded double adapters.

Televisions should not have a build-up of items stored around or on top of them. Televisions should be turned off at the wall socket when not in use.

Electric blankets are not permitted in residential facilities because they are a high fire danger.

It is not safe to allow smoking in bedrooms. Check your agency’s smoking policy and guidelines.

### Water beds

People with a disability, who for therapeutic reasons use a heated waterbed, need to also regularly examine the bed for water leaks and check it for wear and tear. An authorised service company should regularly maintain waterbeds.

### Heating

If the residential facility is fitted with a ducted heating system, make sure that clothing or combustible materials are not stored on or over outlets. Unfortunately, this is a common way to warm or dry clothes.

Portable heaters are not permitted in residential facilities unless they comply with CDG7.4. When they are used, they must be fixed to a wall by a qualified electrician. Take special care with them as they can easily cause fire. Don’t place them too close to a bed, curtains or lounge suite. Never leave heaters on while the residential facility is unattended. Regularly service them and check them for damage and dust build-up. If possible, heaters should have a safety cut out switch which activates when they are overturned.

### Lights

When replacing electric light bulbs, use only the correct type and wattage (use only LED where appropriate). Lampshades that are too close to light globes should be discarded as this can cause fires to start. Watch for lamp bases that can be easily knocked over as these too can be the cause of fire.

## Activity: Hazardous area: Bedroom

**In this activity you’ll need to identify examples of correct bedroom fire safety and prevention.**

Please mark with an ’x’.

|  |  |
| --- | --- |
| Store excess items around and on top of televisions |  |
| Do not place combustible materials over ducted heating outlets |  |
| Discard lampshades that are too close to globes |  |
| Do not leave portable heaters on when leaving the residential facility |  |
| Smoking in bed |  |
| Use electric blankets |  |

## Laundry

The laundry area needs to be carefully checked for dangers. While the tumble dryer is one of the most common causes of fire, it is not the only hazard to be aware of; chemicals and other appliances can also cause fires.

### Tumble dryers

Tumble dryers usually have a lint filter fitted on the inside rear of the dryer or on the back of the door. This filter should be taken out and cleaned after every use to prevent a possible fire because of the build-up of lint coming into contact with the heating element.

The dryer should always be allowed to go through its full cycle, including the cool down cycle.

Adequate ventilation around the sides and the rear of the dryer must be provided and the area behind these appliances must be clean from dust build-up.

### Chemicals

Chemicals stored in the laundry, such as polishes, should be carefully monitored. Cleaning cloths need to be cleaned according to the instructions as some polishes can cause spontaneous combustion when left on cloths.

Also, some cleaning materials, such as Methylated Spirits, should not be stored where a source of ignition or heat is present. An example of an ignition source could be a pilot light on a gas hot water service. Laundries should also be cleared of dust and cobwebs.

### Appliances

When working in the laundry, take care with electrical appliances as the combination of electricity and water is deadly. Never operate electrical equipment with wet hands or while standing in water.

Whether ironing is done in the laundry or another room, make sure that the iron is switched off and unplugged when not in use. All electrical appliances should be switched off when not in use.

## Activity: Hazardous area: Laundry

**In this activity you’ll need to identify fire safety practices for the laundry.**

Tim is a staff member at a residential services centre. He has noticed that the laundry area has not been managed in line with correct fire safety practices. For everyone’s safety, he rectifies this by implementing practices designed to prevent a fire occurring.

Which four of the following are appropriate fire safety and prevention practices for a laundry?

|  |  |
| --- | --- |
| Store cleaning materials away from sources on ignition or heat |  |
| Clean all cleaning cloths according to instructions |  |
| Switch off all electrical appliances when not in use |  |
| Clean the dryer’s filter after every use |  |
| Turn off the fryer before its full cycle has finished |  |
| Locate the dryer flush against a corner wall of the laundry |  |

## Lounge room

Fire can occur in the lounge room due to its heavy use by householders and visitors.

All electrical items that are in the lounge room should be switched off and unplugged when not in use. Appliances such as televisions and DVD players should have adequate ventilation around them and should be regularly dusted. Ventilation openings on these appliances should not be covered up.

If the residential facility is fitted with a ducted heating system, care should be taken to make sure that the outlet vents are not blocked or used as a dryer.

## Hazardous areas: External

If the residential facility has a storage area or garage, take care with what is stored within these areas. If you have flammable liquids or hazardous materials, make sure that they are stored in their correct containers, correctly labelled and with tight fitting lids.

## Flammable liquids

Flammable liquids such as petrol should be stored away from any source of ignition or heat. Store only minimum amounts of these flammable liquids. Avoid overstocking.

Be aware that items such as oil paints and turpentine give off vapours or fumes heavier than air. These vapours will accumulate and travel along the ground to a source of ignition, such as a pilot light, causing fires to start unexpectedly.

It is important that flammable liquids are stored in appropriate containers and that lids are replaced when you have finished using them.

## Pool or spa

If the residential facility has a pool or spa, make sure that chemicals used to maintain it are correctly labelled and stored. Do not allow these chemicals to come into contact with other combustible materials such as kerosene, paper or acids.

These chemicals should be stored separately in sealed containers.

## Combustible materials

It is important to avoid the build-up of combustible materials such as paper or discarded clothing.

Examples of the various types of hazardous materials that may be stored in a shed or garage are:

* cleaning agents such as polishes, Methylated Spirits and ammonia
* pool chemicals such as chlorine, acids and alkaline
* flammable liquids such as petrol, oil, turpentine, cooking oils and Methylated Spirits, and
  + flammable gases such as LPG and BBQ cylinders.

## Correct storage

If any combustible materials are stored at your residential facility, you must:

* read the warning labels
* not store them together
* store flammable liquids in specifically designed tightly closed metal containers
* not use flammable liquids near naked flames
* not keep more than the amount of flammable liquids you require
* keep a register of these items along with material safety data sheets, which give safety information and are available from the item’s manufacturer
* use and store them in a well-ventilated area, and
  + check if a portable fire extinguisher can be in the vicinity of storage areas.

## General care

Outside your residential facility, make sure that you:

* keep the area clean and free from unnecessary obstructions and materials
* have garden hoses attached to the front and rear taps that are long enough to reach all areas of the residential facility and yard
* don’t allow rubbish to accumulate under or around the residential facility
* keep your residential facility’s number clearly visible from the road. It’s advisable to have a luminous number attached to the residential facility in a prominent position, and
  + make sure that waste bins are stored in a safe and secure area away from the residential facility.

## General electrical care

Electrical hazards are also present outside of your residential facility. Make sure that you:

* keep trees and shrubs clear of power lines and windows
* regularly check external electrical fittings for deterioration and replace them if faulty.
* Clean the interiors of light fittings of insects, and
  + don’t use household fuse boxes as storage cupboards.

## Activity: Hazardous area: External

**In this activity you’ll need to identify examples of correct external fire safety and prevention.**

|  |  |
| --- | --- |
| Ensure your house number is clearly visible |  |
| Store flammable liquids I purpose-designed tightly sealed metal containers |  |
| Store flammable chemicals together |  |
| Keep material safety data sheets |  |
| Keep large quantities of rubbish underneath the residential facility |  |
| Clean light fittings of insects |  |

## Smoking

Misuse of smoking materials is a leading cause of residential fires. This is commonly due to incorrect discarding of cigarette materials.

A cigarette that has fallen between furniture cushions can smoulder for hours before bursting into flames. This lapse of time shows how a fire can catch a person unaware and lead to death.

The Department of Human Services has a no smoking policy; inside all DHS owned, operated or funded buildings. Where smoking is permitted outside, it must be in a designated area away from any form of combustible materials.

## Ashtrays

Ashtrays should be emptied daily. Before emptying ashtrays, cigarette butts should be dampened with water to make sure they are properly extinguished. Items such as matches, and lighters should be stored in a safe place when not in use.

## Fire risk behaviour

A small number of people with a disability may exhibit some behaviour's that increase the likelihood of causing a fire. This information is recorded in the resident’s Residential Services File under ‘fire risk alerts’. The Department of Human Services has a ‘Checklist for assessing people with Fire Risk Behaviour’ together with guidelines, and these can be found on the DHS internet site.

Staff members should complete a checklist for each person with a disability and the residential facility’s supervisor should check it. Each person’s checklist should be reviewed annually to ensure currency.

## Telephones

If your residential facility is equipped with a programmable telephone, have the number 000 (triple zero) or local emergency number programmed into it, so that you can just press a single button to access the emergency services. Another helpful idea is to put a 000 (triple zero) sticker on the telephone.

## Room escape routes

In a fire situation, it is important that people have two safe means of escape from every room by which they can evacuate a building.

### Security

In some residential facilities, evacuation routes may be complicated when exit doors are fitted with security screens. These should only be installed when all other security options have been explored.

Where bedrooms are locked for privacy reasons, they should be of the type that can be opened outwards, from inside, without a key.

### Planning the escape

In helping others to escape from a fire, locate the least ambulant residents in bedrooms closest to the residential facility’s exits. This will reduce their travel distance. Check whether everyone can use the exits unaided and where people need assistance, plan how they will be evacuated and the amount of assistance that will be required.

### Master keys

All locks in the residential facility should operate on a master key system, including where an individual locks their bedroom door for privacy reasons. The master key must be kept with the staff member on duty at all times.

### Electric door releases

Electric door releases are installed on both the primary and secondary exits when security is an issue and it is necessary to lock the exit doors. Should a fire occur, when smoke alarms, detectors or sprinklers are activated, the electric door releases will automatically activate and allow the doors to be opened without using a key. This allows easy evacuation of the residential facility.

Electric door releases should be fitted to security screen doors on the primary and secondary exits when a deadlock type mechanism is fitted.

Staff need to be aware of escaping clients as outside doors and gates are also released. The releases reset after 5 minutes and it’s a good idea to check them to ensure they relock.

## Activity: Room escape routes

In this activity you’ll need to identify examples of correct fire escape route preparation and planning.

Fiona and Michelle are staff members at a residential services facility. They are aware of the importance of fire escape routes and are evaluating different escape routes as they plan an effective escape in an emergency.

**Which three of the following steps should they take during their planning?**

|  |  |
| --- | --- |
| Ensure lockable internal doors open inwards |  |
| Ensure the on-duty staff member has the master key in their possession |  |
| Ensure the most ambulant residents have their beds closest to the exits |  |
| Ensure locked exits are fitted with electric door releases |  |
| Ensure there are two means of escape from every room |  |

## Electrical fire safety and prevention

Many fires that occur in homes are caused by preventable electrical faults. Fires have been caused by electrical equipment, such as:

* portable equipment, including heaters, irons and fans
* larger appliances, including televisions, computers and photocopiers, and
* over-loaded power points.

### Appliances

All electrical appliances and equipment should be regularly checked and maintained. Not only is there the danger of fire, electrocution can also occur, especially when leads and plugs are damaged. The supervisor should draw up a maintenance schedule for all appliances and residential facility staff should report any electrical hazards to them.

Check that your residential facility is fitted with a safety switch and if it’s not report it to your supervisor.

### Cords and plugs

You should never place electrical cords under carpets or rugs. Check to see that electrical cords are not placed under the legs of furniture where they may be damaged and eventually cause a fire.

### Power points

Power points in the residential facility should be checked to make sure that they are safe to use. They should not be overloaded with piggyback plugs and the power point itself should not be loose.

### Power boards and double adaptors

Use only power boards or double adaptors with an inbuilt safety switch. If the inbuilt safety switch is tripped then you will know that either; the appliance is faulty, you are drawing too much power or the switch is faulty. You are then able to get them repaired.

### Fire Safety Weekly Checklist

If you find or suspect any kind of electrical fault, complete a Fire Safety Weekly Checklist and report it immediately using the reporting faults or damage procedure.

When any electrical repairs or work are done at the residential facility, only a registered electrical contractor should carry out the work.

Click the links below to view the checklist and obtain more information about reporting faults.

[Fire Safety Weekly Checklist](https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation) < https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation>  
Damage to Asset form

### Turn off and unplug

Make it a rule that whenever electrical appliances are not being used, they are turned off at the power point and unplugged. There are a few exceptions to this rule such as fridges, freezers and videos, which are designed to operate continuously.

In the event of an electrical fire, and if it is safe to do so, turn off the power immediately at the power point or switchboard and call the Fire Brigade.

## Dangers of heat and smoke

### Fire

The greatest killers in fire are the smoke and gases, not the flames themselves. Most people’s idea of how fire behaves is from what they’ve seen in movies. Nothing is further from the reality of a fire.

You may think a room on fire would be full of light, but this is not the case. A fire is black. This greatly restricts visibility. You will have very little visibility in a fire situation. This is why it is essential to have a well-practised fire escape plan that everyone knows.

### Smoke and gases

The dangers of toxic smoke and gases cannot be stressed enough. The smoke from a house fire is charged with toxic gases. Exposure, even for a short time, can prove fatal.

Smoke inhalation and suffocation, rather than burns, cause most fire fatalities.

During a fire, smoke rises and mushrooms out along the ceiling. This smoke layer builds up and gradually descends towards the floor. This is why we say “**get down low and go, go, go**” when caught in a smoke filled environment.

There is greater visibility and cleaner, cooler and more breathable air at floor level.

### Heat

Heat is another factor in a fire that can cause death. The heat stops your body from functioning properly. In a room that’s on fire, the heat builds rapidly. This heat causes disorientation and eventually death if you don’t get out of the room quickly enough. Temperatures in a room-fire can reach up to 1200°C at ceiling level. Heat and smoke in a fire are deadly.

## Weekly fire safety checklist

The weekly fire safety checklist has been developed to assist residential facility staff with maintaining a fire safe working and living environment. The checklist forms an essential part of the fire safety strategy for 24 hour owned, operated or funded residential services. It serves as a tool to:

* ensure that fire safety equipment is ready for use
* ensure exits and exit paths are clear of obstructions
* ensure fire prevention activities and proper “housekeeping” is being maintained, and
  + assist with DHS fire safety compliance requirements for 24 hour owned, operated or funded residential services.

## Reporting fires

Reporting fires and any damage, along with debriefing persons involved is essential.

Once staff follow the emergency procedures and the initial risk to everyone has passed, the staff member should complete Fire Damage to Asset form. The form should be passed on to your supervisor that same day.

If the fire has caused fire safety equipment to be faulty, then you should also report the fault immediately.

Click on the link for more information about who to contact to report a fault and access the Fire Damage to Asset form.

Damage to Asset form

## Impact on individuals

It is also essential to recognise that incidents such as fires may affect individuals. Services such as Critical Incident Stress Management (CISM) debriefing for staff, and debriefing for people with a disability is also available. If you feel that any person requires debriefing, then speak to your supervisor.

## Assessment: Fire Prevention

You should now have a good understanding about fire prevention.

Before we move on, you'll need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

**What is the DHS policy on smoking in buildings?**

|  |  |
| --- | --- |
| No smoking inside, smoking in designated areas only |  |
| No smoking anywhere on the property |  |
| Smoking is allowed anywhere as long as all the residents agree |  |

**What type of key should staff have on them at all times?**

|  |  |
| --- | --- |
| Every key to open every door |  |
| A master key |  |
| Every key that is needed to open exit doors |  |
| A key to the main entrance/exit |  |

**Fires in laundries occur mostly because of?**

|  |  |
| --- | --- |
| Frayed cords, smoking and bad housekeeping |  |
| Smoking, ironing and dirty filters |  |
| Ironing, bad housekeeping and frayed cords |  |
| Incorrect chemical storage, dirty filters in dryers and appliances left switched on |  |

**In fires, what is the most common cause of death?**

|  |  |
| --- | --- |
| Heat |  |
| No Escape Plan |  |
| Locked Doors |  |
| Smoke |  |
| No Smoke Alarms |  |

**What precaution should be taken if the residential facility is fitted with a ducted heating system?**

|  |  |
| --- | --- |
| Outlet vents should not be blocked or used as a dryer |  |
| Outlet vents should not be blocked for more than a few hours at a time |  |
| Outlet vents should be used as a dryer for only non-dripping wet clothes |  |

# Smoke alarm systems

In this part of the program we’ll be looking at the role staff play in ensuring the correct operation of residential smoke alarms or detectors through proper maintenance and testing.

## Aims and objectives

* To understand how to maintain and test residential smoke alarm systems we need to look at:
* the regulatory requirements regarding the installation of smoke alarm systems or detectors
* the differences between domestic and residential smoke alarm systems
* how smoke detectors work and how and when to test them
* how to use the Brooks 2000 residential fire safety system
* how to use residential fire panels and
* what alarm systems are available for people with a hearing and/or visual impairment and who to contact for assistance with them.

## Introduction to smoke alarm systems

The Victorian Building Regulations require the installation of smoke alarms in domestic and residential facilities. There are different requirements for the installation of smoke alarms in domestic and residential facilities. You should be aware of the differences and how they apply to you.

## Domestic smoke alarm systems

Domestic smoke alarm systems are designed to detect smoke while you are asleep. When activated, the alarm’s signal should wake and alert the occupants to the presence of smoke.

Private homes are required to have at least one working smoke alarm installed near the bedrooms. A smoke alarm can be:

* a stand-alone battery-operated alarm, or
* connected to the home’s power supply.

Domestic smoke alarms are not used in residential facilities. All smoke detectors installed in residential facilities are hard wired.

### How do they work?

Invisible smoke and fumes given off during the early stages of a fire will be detected by smoke detectors in residential or domestic alarm systems. As the fire develops it will continue to detect the smoke. A smoke detector should be placed in every bedroom and living area except the kitchen and bathroom.

## Residential alarm systems

Residential alarm systems are the type of system used in residential facilities occupied by people with a disability. They are very different to the domestic alarm systems used in private homes.

### What are they designed for?

Residential smoke alarm systems are designed to detect smoke and alert occupants to the presence of smoke in the very early stages of a fire. The smoke detectors are linked to an alarm, which will alert occupants and allow time for them to evacuate to safety.

### How do they work?

Residential alarm systems have interconnected smoke detectors with a residential fire panel. They work the same as the domestic smoke alarms but their connection to the residential fire panel allows more options for alerting occupants, testing, fault finding, and or other functions.

### What do they do?

Residential alarm systems are capable of numerous functions which a domestic smoke alarm is not, which can include:

* detecting smoke and activating the alerting or warning system
* monitoring power supply and changing over to battery back-up when the power fails
* monitoring the sprinkler system
* releasing electro-magnetic door locks
* monitoring whether the water supply valve on the sprinkler system is shut off
* monitoring if there is a fault in the system
* testing the smoke detection system
* isolating a fault
* shutting off the supply to gas appliances
* operating emergency lighting, and
  + shutting down the heating or cooling systems in an emergency.

## Installation

Qualified technicians install residential smoke alarm systems, as these systems need to be interconnected and powered by the mains supply with a battery backup.

A smoke detector will be located in each bedroom and the main living areas of the unit. They are normally mounted on the ceiling or within 3m of the bed pillow. They can also be mounted on the wall near the ceiling.

When a detector detects smoke, it will light up to indicate the location of the fire or fault.

## Why do smoke detectors false alarm?

Due to their sensitivity and the importance of detecting smoke early, the smoke detector will detect fumes or smoke given off by burnt toast, food cooking in the oven, or steam from hot water, such as when someone has a hot shower. When this occurs clear the air by opening windows and doors for a short period.

## Faults

A faulty or damaged smoke detector may not work correctly to detect smoke from a fire and it is imperative that it is reported immediately. When a fault occurs it should be indicated on the residential fire panel by either a warning light or an audible alarm. When the fault alarm activates, notify your supervisor who will call the fire equipment service provider (FESP), who will inform you whether it is safe to remain in the building.

## How and when to test smoke alarms?

Smoke alarms are tested monthly by a maintenance technician. Included in the maintenance program for the smoke detection system, is an annual smoke test of the smoke alarms, which the smoke detection system maintenance technician conducts.

Staff are required to visually check smoke detectors weekly for obvious faults and damage using the Weekly Fire Safety Checklist.

[Fire Safety Weekly Checklist](https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation) < https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation>

## Maintenance of smoke alarms

Smoke alarms also require regular cleaning.

The smoke detection system maintenance technician will check and maintain smoke alarms and the residential fire panel in your residential facility. Part of the maintenance program is to clean all smoke alarms with a vacuum cleaner every six months.

Staff should also clean smoke alarms that look dirty, or have bugs or spider webs around them.

Never paint a smoke alarm.

## Smoke alarms for the sensory impaired

For people who have a sensory impairment a conventional smoke alarm which has only an audible warning may be of little benefit.

For those with a hearing impairment, alternative types of signals must be considered. They can receive about the same level of protection as those who rely on audible alarms, with systems that use visual signals, such as a strong strobe light.

## Strobe light and epilepsy

Please note, alarm systems that use a strobe light will not affect people with epilepsy. A vibrating pad is also available, which can be placed under the pillow of the person sleeping. This is a very practical way of alerting a person with a hearing impairment or a hearing and visual impairment.

Various models are available. They are comprised of a conventional smoke alarm with an audible alarm and an additional bright white xenon strobe light. They should be placed above the sleeping person so the flashing strobe will awaken and alert them.

## Further advice

For further advice about smoke alarm models that use strobe lights contact:

* Better Hearing Australia Inc. (03) 9510 1577, and/or
  + the MFB Community Resilience Department on (03) 9665 4464.

## Activity: Brooks 2000 residential alarm system

While facilities may use different types of fire panels, the basic principles are the same. Let’s look at how to use the Brooks residential fire safety system.

### 3 position

The system has a 3-position key switch:

* Off: is not to be used
* Auto: is the normal mode of the system, and
* Fire: may be used for evacuation drills

### Alarm panel

In the ‘Alarm’ panel:

* ‘Alarm/Locate’ locates the activated smoke alarm, silences all normal smoke alarms and resets after five minutes
* ‘Alarm/Isolate’ isolates or disables all smoke alarms for five minutes and then resets the system to normal mode, and
  + ‘Sounder/Silence’ isolates the sounder when a fault condition is present and will reset once a fault is repaired.

### Monitored Valve panel

If any of the lights in the ‘Monitored Valve’ panel are illuminated red and the bell and smoke alarms are active, check the valve in the sprinkler cabinet to see if it’s closed or call the fire service maintenance contractor.

### Sprinkler panel

If any of the lights in the ‘Sprinkler’ panel are illuminated red the sprinkler has activated and the bells and smoke alarms are active, call the Fire Service Maintenance Contractor.

### Manual Override panel

The buttons in the ‘Manual Override’ panel can be used to release a particular door strike to unlock a door and then repressed it to relock it. Door strikes will release in any alarm mode automatically.

### Ancillary Control panel

Avoid using any of the buttons in the ‘Ancillary Control’ panel as they are for the exclusive use of those who service the system.

### Gas Shutdown System panel

In the ‘Gas Shutdown System’ panel the gas system can be isolated, reset and tested. When the ‘Main Valve Open’ and ‘Pressure Fault’ lights are coloured green all is normal, if illuminated red contact the fire service maintenance contractor.

## Activation of the system by fire

There are two ways an alarm system might be activated: by fire or a false alarm.

In the event of activation by fire:

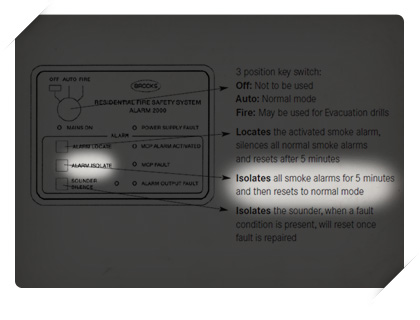
* all smoke detectors will operate, as they are interconnected
* all electric doors will strike and release doors, allowing people to evacuate — a 30 second time delay will allow you time to investigate the alarm before the doors’ locks release
* a strobe light will be activated at the external entrance to the residential facility
* the emergency lighting will switch on
* the cooling or heating system will turn off, and
* individual staff members are required to call the fire brigade.

## False alarm

If an alarm activates, and upon investigation you find no fire, you should still investigate other causes such as steam, cooking fumes or faulty alarms. You can press the ‘HUSH’ button on the individual smoke alarm to silence the sounder and to allow time to clear steam or fumes that have caused the alarm to operate and reset the system.

## Isolating the alarm

If the alarm does not silence after this procedure you could press the ISOLATE button on the residential fire panel labelled ‘Alarm Isolate’. This function will silence all alarms but will also mute all other devices on the system. This function will reset after five minutes. If the smoke alarm continues to activate, you should report the fault immediately.



## Assessment: Smoke alarm systems

You should now have a good understanding about the role staff play in ensuring the correct operation of residential smoke alarms through proper maintenance and testing.

Before we move on you'll need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

**What do you do if you discover a fault with the alarm panel or smoke alarms?**

|  |  |
| --- | --- |
| Leave it until the next scheduled maintenance contractor comes to the residential facility |  |
| Notify your supervisor who will call the fire equipment service provider (FESP) |  |
| Contact the fire alarm company |  |

**What options on smoke alarm systems, are available to awaken those with a hearing impairment?**

|  |  |
| --- | --- |
| There are no other options |  |
| Vibrating beds |  |
| Strobe light or vibrating pads under pillows |  |

**How often should smoke alarms be tested?**

|  |  |
| --- | --- |
| Monthly |  |
| Daily |  |
| Fortnightly |  |
| Never |  |

# Sprinkler systems

In this part of the program we take a look at how to check that residential sprinkler systems are operating correctly, and the procedures to follow if they are not.

## Objectives

To understand how to operate sprinkler systems correctly we need to look at:

* how sprinkler systems are used and under what circumstances they should operate
* how and when to check the sprinkler system for correct operation, and
* who to contact for assistance if a fault in the sprinkler system is detected.

## Residential sprinkler systems

A residential sprinkler system (RSS) is an automatic fire suppression system designed to protect life in a fire situation. They are installed in buildings where residents need assistance to evacuate when a fire occurs and constructed from modern materials with unobtrusive sprinkler heads mounted in the ceiling or high on the walls of a residence. The heads are designed to react quickly to the heat of a fire where they activate alert signals for the occupants and help to suppress the fire in its early stages.

The design standard for residential sprinklers is different to a commercial sprinkler system installed in an office or factory.

## How does it work?

Sprinklers heads are in the ceiling either exposed and easily seen or concealed behind a protective cover.

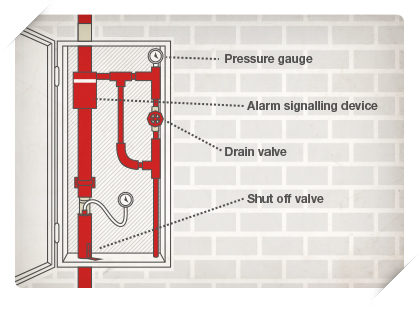
When a fire breaks out in a room, the heat rises to the ceiling. As the heat from the fire increases, the liquid filled glass bulb in the sprinkler head heats up and expands. At a pre-determined temperature, (68oC for red sprinkler bulbs), the glass bulb shatters, breaking the seal and releasing the water. The spray pattern is designed to spread the water evenly throughout the room to cool the fire, stop it from spreading and extinguish it.

## Components of a sprinkler system

The most obvious components of the residential sprinkler system are the control valves located on an outside wall, and the sprinkler heads inside.

The residential sprinkler system control valve is enclosed in a secure cabinet near the front of the building. The main features of the control valve assembly are the:

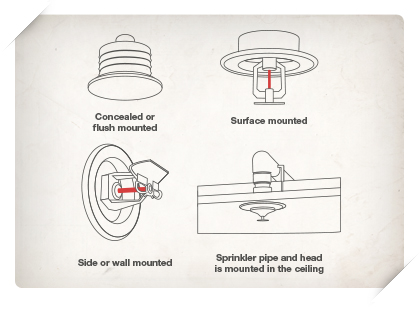
* shut off valve
* drain valve
* alarm signalling device, and
* pressure gauge.



## Sprinkler heads

There are various types of sprinkler heads that can be installed in a residence, which include:

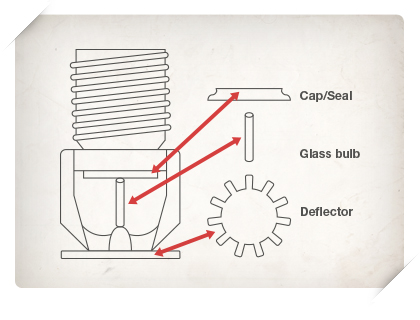
* concealed or flush mounted
* surface mounted
* side or wall mounted, and
* models where the sprinkler pipe and head are mounted in the ceiling.



## How does a sprinkler head work?

The threaded end of the sprinkler head screws into a water pipe in the ceiling, which is not normally visible from below. The cap seals the opening and prevents water from flowing out. The glass bulb holds the cap or seal in place.

The glass bulb is filled with liquid. Heat from a fire expands the liquid. The bulb is designed to break at a predetermined temperature, which causes the cap or seal to fall away and water to stream out. The water stream then hits the deflector, which breaks it into a spray of tiny droplets.



## When a fire occurs

Sprinklers are installed to control the growth and spread of a fire. Their action reduces the build-up of toxic smoke and gases in the residential facility and allows staff time to assist others to safely evacuate the residents.

As a small fire develops into a larger fire, the smoke initially generated will activate the smoke detection system, alerting everyone of danger. When a structure is on fire, smoke is the killer and staff must respond quickly to begin the evacuation. As the fire develops it produces enough heat to activate the sprinkler head. The water spray will control and begin to extinguish the fire. There will still be a lot of smoke in the residence and evacuation of everyone is still required.

## Smoke volume

In a residential facility where there are internal gas appliances, such as gas stoves, internal heaters and hot water services, the sprinkler system’s shut-off valve will be activated in the event of a fire.

Small fires may not generate enough heat to activate the sprinkler system; this can occur when materials burn slowly or smoulder. They generate smoke and can activate the smoke detectors, but if they do not generate enough heat, the sprinkler will not operate.

## When the fire is out?

When the fire is out the fire brigade will generally check the area to ensure that the fire is fully extinguished and investigate the fire to determine the cause. They may:

* assist with cleaning up the damage and restoring some normality to the residence, and
* reinstate the sprinkler system by replacing the damaged head and turning on the water supply.

Staff are not responsible for resetting the sprinkler system or a residential fire panel when a sprinkler activates. It requires a maintenance technician to fully check the system before it is returned to operational readiness.

## Reporting

Staff should ensure that the fire has been reported to their supervisor, who will report it to the Divisional Fire Risk Management Coordinator of the Fire Risk Management Unit. Nobody should return to the residential facility until the fire protection systems have been reactivated and the fire brigade has given the all clear if they’re in attendance.

## Checking the sprinkler system

Residential sprinkler systems require constant checking to ensure they always remain ready for use in a fire situation. A maintenance technician will maintain and check the sprinkler system however, staff are also required to visually check the sprinkler system to identify and report any obvious faults and damage. The check should be performed weekly.

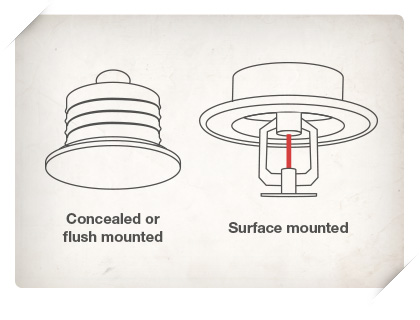
## Checking sprinkler heads

Your weekly check should include checking sprinkler heads for obvious damage. A damaged sprinkler head:

* may not operate immediately
* could progressively fail over a period of time
* could fail when there is a sudden increase in water pressure, or
  + sprinkler head may drop from flush mount position.

The sprinkler head seal may fail and begin to slowly leak or fully operate spraying water into the room.

Any obvious damage to a sprinkler head must be reported to the maintenance company via the designated emergency call number.



## Checking the pressure gauge

Your weekly check should also include checking the pressure gauge in the sprinkler control cabinet. Several factors affect the water supply pressure to the sprinkler system after is has been installed.

They are:

* the closure of the supply valve, or
  + the reduction or fluctuation of water supply from the mains.

An adequate water pressure is essential for the sprinkler system to operate effectively. Reports of fluctuating water pressure over a period of time, provides evidence which can be taken to the water supply utility to upgrade their water supply system.

Staff are required to report to the maintenance company via the faults procedure any faults or obvious damage to the sprinkler system.

## Exposing the myths

We’ll expose the myths and reveal the facts associated with residential sprinkler systems.

|  |  |
| --- | --- |
| **Myth**  Sprinkler heads are ugly and detract from the aesthetics of a home | **Fact**   * The losses caused by fires in buildings installed with sprinklers are significantly less than those caused by fires in unsprinklered buildings * Typically the fire brigade uses as much as 100-1,000 times more water to put out a fire than is delivered by a sprinkler head.   + Rooms protected by sprinklers can usually be back in use within a few hours, and the rest of the residence is usually unaffected. |
| **Myth**  When a fire occurs, every sprinkler head goes off | **Fact**  The accidental operation of a sprinkler head is very rare.  Generally sprinkler heads accidentally operate due to them being knocked or damaged in some way. |
| **Myth**  Sprinkler systems cause excessive water damage | **Fact**  Through new technology, the size and appearance of sprinkler heads have dramatically improved.   * Smaller sprinkler heads have modified profiles. * Sprinkler heads can be flush-mounted in ceilings. * Sprinkler heads are available in colours matching décor. * Side-wall heads can replace ceiling heads, and   + Temperature sensitive fixtures can conceal heads. |
| **Myth**  Sprinkler heads frequently become accidentally activated | **Fact**   * Sprinkler heads are individually activated by fire Residential fires are usually controlled with one sprinkler head. |
| **Myth**  Sprinklers are designed to protect property, but are not effective for life safety | **Fact**  Residential sprinklers provide one of the best levels of life safety. |
| **Myth**  A smoke detector or alarm will provide enough protection | **Fact**  Operational smoke alarms can save lives, but they do not extinguish a growing fire, or protect those unable to escape. They provide early warnings of smoke and fire. |

## Assessment: Sprinkler systems

You should now have a good understanding about the information in this part of the program.

Before we move on you'll need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

**How often should staff in a residential facility check the sprinkler system and pressure gauges?**

|  |  |
| --- | --- |
| Daily |  |
| Weekly |  |
| Monthly |  |
| Never, this is done by a maintenance contractor |  |

**Where should a sprinkler cabinet be located in a residence?**

|  |  |
| --- | --- |
| Generally at the front or side of the residence. Each building may differ slightly, but the cabinet will be identified in the Evacuation Plan. |  |
| In the staff sleepover/office |  |
| In the kitchen |  |

**What statement best describes how a sprinkler operates?**

|  |  |
| --- | --- |
| Heat from a fire expands the liquid in the bulb of the sprinkler head. This breaks the bulb releasing a cap and water is sprayed out over the fire |  |
| Smoke will set off all the sprinkler heads after two minutes |  |
| Heat will set off every sprinkler simultaneously |  |

**What is the purpose of checking the sprinkler system weekly?**

|  |  |
| --- | --- |
| Making sure the contractor is doing their job |  |
| Making sure the cabinet is locked |  |
| To check for damage and for appropriate water pressure levels |  |

**Who should you contact if you detect a fault in the sprinkler system?**

|  |  |
| --- | --- |
| Leave it until the next scheduled maintenance contractor comes to the CRU |  |
| Report the fault immediately to the maintenance company via the faults procedure |  |
| Contact the MFB or CFA |  |

# Emergency procedures theory

In this part of the program we’ll be looking at emergency procedures and evacuation plans for 24 hour residential services.

## Aims and objectives

To understand emergency procedures and evacuation plans we need to look at:

* the threats or emergencies that will lead to an evacuation
* warning alerts and signals
* the specific considerations included in evacuation procedures
* additional needs and considerations for people with a disability in evacuation
* the different methods of rescue, and
  + where to locate the installed portable fire equipment in the residential facility.

## Emergencies and supervisors

There are many types of emergencies that you could be confronted with, including:

* a fire
* a medical incident
* a gas leak
* a bomb threat, or
  + intruders.

All residential facilities must have up-to-date emergency procedures and evacuation plans.

It’s important for supervisors to:

* ensure that staff read the emergency procedures
* conduct evacuation exercises regularly, and
  + ensure that staff new to a facility complete an orientation checklist.

Each staff member needs to participate in at least one evacuation exercise per year.

## Your emergency procedures

This section of the program will assist you in understanding the emergency procedures and evacuation plans for your residential facility in the event of a fire.

Your primary concern in a fire emergency should be your own safety and the safety of others. The best way to achieve this is by evacuating the residential facility first. Attempting to extinguish the fire should be a secondary concern.

If there is a small smouldering fire or a cooking fire, turning off the power or heat may give you more time to evacuate and reduce the risk of the fire becoming larger. However, don’t attempt this if life is at risk.

## Fire safety principle

DHS regards the life safety of people with a disability and its staff as a high priority. This means the evacuation of all occupants takes priority over the extinguishment of the fire. The installed sprinkler system is designed to reduce the spread of fire throughout the residential facility.1 Improvements such as this have removed the necessity for staff to manage all aspects of a fire situation. The current strategy now focuses on a Safe Place and Safe People. The safety of people is the first priority and is addressed through safe engineering controls and is supported through an effective procedure and allowing the installed equipment to manage any fire.

## Considerations for people with a disability

When practising emergency evacuation procedures, you should take into consideration the mobility capabilities of people in the residential facility, along with any medications that may impair a person’s ability to evacuate.

To assist in an evacuation, residents who are totally dependent on assistance should be housed in bedrooms close to exit doors of the residential facility.

## Order of evacuation

The order in which people should be evacuated is:

* **mobile and capable to evacuate themselves** – the first group evacuated
* **people that can be evacuated with little assistance** – the second group evacuated, and
  + **people that are totally dependent on assistance** – the third group evacuated.

The reason for this evacuation order is to remove the maximum number of people from the home as quickly as possible.

Remember, your safety and the safety of others depends on a swift and orderly evacuation of the residential facility in an emergency.

## Activity: Order of evacuation

Place the order in which people should be evacuated from a residential facility in an emergency situation in the correct order, from the first recommended group to the last, by clicking and dragging each description onto the correct location on the clipboard.

|  |  |
| --- | --- |
| Mobile and capable to evacuate themselves |  |
| People that are totally dependent on assistance |  |
| People that can be evacuated with little assistance |  |

## Emergency evacuation procedures: planning and practising

There are many things to consider when planning and practising emergency evacuation procedures, including:

* the types of emergencies that may occur in your residential facility that will affect all occupants
* how people will be alerted to an emergency situation
* the number of staff likely to be on duty at different times
* the location of the telephone and if 000 (triple zero) can be programmed as a ‘quick’ dial
* the security devices on doors, and
  + ensuring the escape routes to assembly areas are free from obstructions, such as locked gates and cars.

Additionally, you’ll also need to:

* have two evacuation assembly areas established because you may not be able to use one assembly area due to the nature of the emergency or the weather conditions
* consider access to your building and where emergency vehicles will be positioned when they arrive by ensuring assembly areas are well away from these areas
* consider the welfare of people with a disability and how to manage it during an emergency evacuation, including medication and medical instructions, and
  + include evacuation exercises as part of any ongoing training and for any new staff.

## Emergency evacuation procedures: during an emergency

During an emergency evacuation procedure, it’s imperative to:

* evacuate everyone from immediate danger to a safe location by moving them out of a room with a fire
* ensure all rooms and areas have been checked for people
* always close the door when leaving a room after it has been checked
* call the emergency services on 000 (triple zero) to inform them of the emergency
* be aware of where the emergency exits are and the distance to the outside doors, and
  + crawl low to the ground if smoke is present, and close doors quickly when exiting to prevent smoke travelling.

## Activity 1: Identify how to practice emergency evacuation procedures

Now it’s your turn. In this activity you’ll need to identify what to do when practising emergency evacuation procedures.

You’re part of a small team that has been asked by the supervisor to plan the emergency evacuation procedure for your residential facility. You’ve been asked for suggestions of how to reduce the risk of an emergency situation on a day-to-day basis.

**Taking which of the following steps will help you reduce this risk?**

|  |  |
| --- | --- |
| Ensuring all exit doors are locked |  |
| Knowing how many staff are likely to be on duty at various times |  |
| How people will be alerted to an emergency situationIdentifying if 000 (triple zero) can be programmed into phones as a ‘quick’ dial number |  |
| Identifying security devices on doors |  |
| Identifying where telephones are |  |
| Knowing the types of emergencies that may occur in your residential facility |  |
| Maintaining a clear route to the assembly area |  |

## Activity 2: Identify how to practice emergency evacuation procedures

The supervisor then focuses on what needs to be considered during an emergency evacuation, so that staff members can practise for an emergency situation and know what to do during an actual emergency evacuation.

**Which of the following considerations will help to reduce the risk of harm to staff and residents during an emergency situation?**

|  |  |
| --- | --- |
| Closing the door when leaving a room that has been checked |  |
| Ensuring all rooms and areas have been checked for people |  |
| Being aware of where the emergency exits are and the distance to the outside doors |  |
| Crawling low to the ground if smoke is present, and closing doors quickly when exiting to prevent smoke travelling |  |
| Removing people out of a room with fire and relocating them to a safer location |  |
| Calling emergency services on 000 (triple zero) to inform them of the emergency |  |
| Opening all doors Ensuring all staff exit first |  |

## Individual responses

A person’s response in an emergency is often difficult to predict. Their behaviour can change due to:

* a change in routine, such as an evacuation occurring at night
* the effects of heat and smoke, or
  + the confusion of having several different people from emergency services in their home.

The circumstances of the emergency may frighten and confuse some people, requiring them to have intensive care, support and supervision.

As the number of staff on duty will vary between each residential facility, it’s essential to discuss with the supervisor each staff member’s role and what the role of emergency services will be.

## Procedures for fire

During a fire emergency, it is imperative that staff are able to respond immediately so that everyone’s safety can be maximised. To help achieve this outcome, staff should refer to the Standard Fire Orders. By following these we achieve a uniform approach in all residential facilities.

## Standard Fire Orders

In the event of a fire related emergency, Standard Fire Orders are to:

* **assist anyone in immediate danger** – consider your own safety before taking action
* **close the door** to prevent smoke and fire spreading to other points of the residential facility as this gives you more time to evacuate
* **call the fire brigade** on 000 (triple zero) and tell them your name, location, the residential facility is for people with disabilities, the number of people present, the type of emergency and if anyone is trapped inside
* **evacuate to the assembly area** – you’ll have a primary and a secondary assembly area to go to, and
  + **remain at the assembly area and check everybody is accounted for** to ensure that everyone has been evacuated safely.

## Activity: Identify the steps for the Standard Fire Orders

Now it's your turn. Number the steps in the Standard Fire Orders in order, from the first recommended step to the last.

|  |  |
| --- | --- |
| Evacuate to assembly point |  |
| Assist anyone in immediate danger |  |
| Call the fire brigade |  |
| Remain at the assembly area and ensure everybody is accounted for |  |
| Close the door |  |

## Changing the order of standard fire orders

Standard Fire Orders are both effective and flexible. However, you do not need to follow standard fire orders in the numerical order if the situation you are faced with requires you to act in a different way.

By following the Standard Fire Orders in the most appropriate way, you can quickly evacuate everyone and notify the fire brigade as early as possible.

Fire orders should be displayed in a prominent location near the front door of the residential facility and in the office area as applicable.

## Activity: Identify the fire orders that have not been followed

Now it’s your turn. In this activity you’ll need to identify which of the Standard Fire Orders have not been followed in a case study scenario.

You hear a resident in their room yelling out for help. You rush over and see fire at the base of the curtain. The resident requires your assistance so you help them exit. You don’t close the door as you leave, but you raise the alarm and call the fire brigade as soon as possible. Meanwhile, other staff members are checking rooms and evacuating residents. Shortly after, people are assembling at the assembly areas. The roll is taken and everyone is accounted for. You wait for emergency services to arrive but see that smoke has taken hold of an entire floor. A staff member runs back to the residential facility because he’s forgotten his wallet.

**Which of the Standard Fire Orders have not been followed?**

|  |  |
| --- | --- |
| ­­­Call the fire brigade |  |
| Remain at the assembly area |  |
| Close doors to prevent fire spreading |  |
| Assist anyone in immediate danger |  |
| Evacuate to the assembly area |  |

## Evacuation diagram

Evacuation diagrams should be drawn up specifically for your residential facility, accurately displaying the layout of the residential facility and the:

* location of all installed firefighting equipment, including fire extinguishers and fire blanket
* exit points from the residential facility, and primary and secondary assembly areas
* way out of every room
* sprinkler control valve assembly
* gas and electricity isolation points, and
  + location of the evacuation pack.

People should be able to easily identify the symbols used to indicate these points. Let’s now take a closer look at what a good evacuation plan might look like.

## Evacuation diagram example

The home evacuation diagram on this page outlines the key features that need to be known in case of an emergency.

Arrows clearly indicate the exit points out of the residential facility, as well as how to get to a primary and secondary assembly area. The evacuation diagram also shows a fire extinguisher and fire blanket, which have been marked by an asterisk at the centre of the plan.

## Activity: Identify what should be included in an evacuation diagram

In this activity you’ll need to identify examples of what should be included in an evacuation plan.

|  |  |
| --- | --- |
| The way out of every room |  |
| The location of the evacuation pack |  |
| The location of smoke alarms |  |
| The location of the sprinkler control valve assembly |  |
| The location of gas and electricity isolation points |  |
| The location of all installed firefighting equipment, such as fire blanket and portable fire extinguishers |  |
| All previous versions of the evacuation plan |  |
| Exit points from the residential facility and primary and secondary assembly areas |  |

## Evacuation route

The evacuation route from the residential facility to the assembly area must:

* be easy to follow and take you directly to the assembly areas
* be free of obstructions and other hazards, such as tree branches
* cater for the needs of mobility impaired and non-ambulant clients
* have gates that are easily opened, preferably in the direction of travel away from the residential facility, and
  + provide another way around the residential facility should the route be blocked by the fire.

## Assembly areas

When the Fire Risk Management Coordinator or other qualified person determines the location of both your primary and secondary assembly areas, they should:

* limit the distance of travel to the assembly area so it isn’t too far away
* not cross roads or streets, especially those that are busy
* ensure the assembly area is safe and secure
* ensure the assembly area is a safe distance from the residential facility so that smoke or debris cannot harm anyone, and that no-one can wander off on their own
* where possible/practical, the area provides shelter from adverse weather conditions, and
  + ensure the secondary assembly area can be used safely should the primary assembly area be affected.

## Considerations for alternative assembly areas

If you have difficulty selecting an assembly area near your residential facility, there are several options you should consider as alternative assembly areas, including:

* the front yard of a neighbour’s property
* a park or vacant land in close proximity, or
  + a church, school or public hall.

Be aware that the nature strip at the front of your residential facility is usually not a good location for an assembly area as emergency services will generally need to park there.

## Activity 1: Identify the appropriate evacuation routes and assembly areas

A cooking fire in the kitchen has set off the fire alarm. You’re helping two residents with good mobility evacuate from their room to one of the predetermined assembly areas. You reach a part of the property where you are presented with two alternative ways of continuing on to the destination.

**Which of the following considerations will help you to determine if the route is appropriate?**

|  |  |
| --- | --- |
| If it does not have any obstructions or other hazards |  |
| If it leads to the back of the residential facility, where there is no way out |  |
| If it has several large tree branches hanging over it |  |
| If it provides another way around the residential facility, away from the emergency |  |
| If it has a gate with a large padlock on it |  |
| If it has a gate that can be opened easily |  |
| If it is easy to follow and takes you directly to the assembly areas |  |
| If it has several large boxes preventing easy access |  |

## Activity 2: Identify the appropriate evacuation routes and assembly areas

You and the two residents have safely evacuated from the residential facility and property. However, both the primary and secondary assembly areas have council vehicles parked there as road works are being carried out.

**Which of the following places would provide an appropriate alternative assembly area?**

|  |  |
| --- | --- |
| A busy shopping centre on the other side of a main road |  |
| A train station 20 minutes’ walk away |  |
| A public hall |  |
| The nature strip at the front of your residential facility |  |
| A park |  |
| The middle of the road |  |
| A school |  |
| Vacant land nearby |  |
| A neighbour’s front yard |  |
| A church |  |

## Who to notify in the event of an emergency

In the event of an emergency, you’ll need to call emergency services – 000 (triple zero) – and also on-call.

Make sure you call 000 (triple zero) at your first opportunity and include:

* your name
* the name of the residential facility and the nearest cross road
* information that the residential facility is for people with disabilities
* the number of people in the residential facility
* the type of emergency, and
  + if anyone is trapped inside.

The evacuation pack contains a list of on-call numbers you’ll need to call to notify your line management.

## Evacuation considerations

In addition to evacuation considerations already discussed, the person in charge should also:

* ensure the fire brigade has been notified
* ensure an orderly flow of people from the premises, using the most ambulant to least ambulant principle
* ensure a responsible person is in attendance at the assembly area
* ensure your evacuation pack is taken when you leave, if applicable
* ensure all rooms have been checked, including toilets, bathrooms and laundry, and
  + stop anyone from re-entering the residential facility.

Remember that you’ll be able to evacuate more people in a shorter time if you work as a team.

## Situation report

Be prepared to provide a situation report to the fire brigade when they arrive detailing the specifics of the emergency. Remember that the role of emergency services is to:

* evacuate as many people as possible
* extinguish the fire, and
  + reset the alarm control panel, gas valves and sprinkler system.

## Supervisor’s responsibilities

Supervisors have various responsibilities, including:

* conducting regular evacuation exercises
* maintaining all installed fire safety equipment, such as smoke alarms, residential/domestic sprinkler systems and portable fire extinguishers
* training all staff and undertaking refresher sessions regularly
* ensuring all new staff are aware of emergency procedures
* maintaining good housekeeping practices
* displaying residential facility evacuation plans
* having emergency evacuation aids in place and ensuring staff can operate the aids
* keeping relevant documentation on people with a disability up to date, and
  + keeping emergency contact numbers up to date.

## Supervisor’s additional responsibilities

In addition, supervisors must also:

* ensure the local fire brigade is aware of security features that may affect the control of an emergency, such as security devices, Perspex in windows and locks on frames and doors
* report and rectify any faults that have been brought to attention
* ensure staff know the location of firefighting equipment and are trained in its use
* complete an incident report form whenever a fire occurs passing on information to the relevant line manager as soon as possible, and
  + report to the line manager any concerns about fire safety in the residential facility.

## Evacuation pack

An emergency evacuation pack should be compiled and kept in an easily accessible place. It should contain:

* a First Aid kit
* a yellow vest, cap or tabard
* emergency procedures
* evacuation plans
* profiles for people with a disability
* a list of emergency telephone numbers
* a house plan showing bedroom location
* a torch
* information about local emergency services, such as pre-fire plans, and
  + a list of the on-call telephone numbers.

These items should be kept in a strong bag with a zip top, close to an exit route. Please note that the portable phone operates on mains power, so it will not work if the power has been disconnected.

## Activity: Identify which items should be in an evacuation pack

**In this activity you’ll need to identify items that should be kept in an evacuation pack.**

|  |  |
| --- | --- |
| A fire blanket |  |
| Evacuation plans |  |
| Emergency procedures |  |
| Fire Extinguisher |  |
| A list of the on-call telephone numbers |  |
| A house plan with bedroom locations |  |
| A first aid kit |  |
| Profiles of the clients that live in the building |  |
| A yellow vest, cap or tabard |  |
| A spare sprinkler head |  |
| Emergency telephone number list |  |
| Information about local emergency services |  |
| A spare electrical lead |  |
| A torch |  |

# Assessment: Emergency procedures theory

You should now have a good understanding of emergency procedures and evacuation plans for 24 hour residential services.

Before we move on you'll need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

**People with mobility impairment should be located in bedrooms close to exit doors.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**The correct steps to take when discovering a fire are to assist any person in danger, to close the door, to call the fire brigade, to evacuate and to remain at assembly area.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**What is the primary concern in a fire emergency?**

|  |  |
| --- | --- |
| Life safety |  |
| Saving the residential facility |  |
| Putting the fire out |  |
| Waking the neighbours |  |
| Ringing your agency |  |

**Which two of the following are reasons for needing a primary and a secondary assembly area?**

|  |  |
| --- | --- |
| Because conditions may block the use of one area |  |
| So that there are not too many people at the one assembly area |  |
| So you can go to the nearest point when evacuating |  |
| All of the above. |  |

**Which of five the following are situations that will typically require a residential facility to be evacuated?**

|  |  |
| --- | --- |
| House fire |  |
| Gas leak |  |
| Smoke alarm maintenance |  |
| Bomb threat |  |
| Medical incident |  |
| Intruders |  |
| Car crash on the street the residential facility is located on |  |

**Why should everyone remain at the assembly area?**

|  |  |
| --- | --- |
| It’s a good place to meet |  |
| Because we’re told to |  |
| It helps us to check if everyone is out of the residential facility |  |
| All of the above |  |

**Working as part of the emergency team is important because you work more effectively in getting as many people evacuated as possible in the shortest time.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**The role of the emergency services is to evacuate as many people as safely as possible, to extinguish the fire, and to reset the alarm control panel, gas valves and sprinkler system.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**Which two of the following are reasons for closing the door to a room when there is a fire?**

|  |  |
| --- | --- |
| You’ve checked the room and know no-one is inside |  |
| So you know which room is on fire |  |
| To prevent damaging the rest of the residential facility |  |
| To prevent smoke spreading |  |
| As a courtesy to others in the residential facility |  |

**Why should you check all rooms in the residential facility when evacuating?**

|  |  |
| --- | --- |
| To make sure all lights are turned off |  |
| To see whether or not the fire has spread anywhere else |  |
| To ensure everyone has evacuated |  |
| All of the above |  |

# Emergency evacuation exercises

In this part of the program we take a look at how to effectively conduct an emergency evacuation exercise following the guidelines and procedures established for residential facilities.

## Overview

To understand how to conduct an effective emergency evacuation exercise we need to look at how to:

* respond appropriately to warning signals
* demonstrate the emergency evacuation procedures for your residential facility, in co-operation with personnel who are authorised to instruct
* demonstrate techniques that can be used to rescue people who need assistance to evacuate
* report the result of the evacuation to relevant parties, and
  + complete the on-line evacuation record.

## Planning the exercise

The success of an emergency evacuation at your residential facility depends upon the preparedness of all staff. Staff and residents are likely to respond appropriately in an emergency evacuation if they have had training and regular practice of evacuation procedures. When planning a practice evacuation exercise:

* identify the objectives of the exercise – what do you want to achieve?
* identify the most appropriate time to conduct the exercise, remember emergencies can occur at any time, night, day and weekend, and
  + discuss with other staff, the type of emergency and the scenario you want to test your procedures against.

## Further planning considerations

When planning a practice evacuation exercise you should also:

* document the schedule for the exercise, which includes how you will initiate the emergency and what should occur up until the exercise is concluded
* decide how everyone will be told about the exercise. It is strongly recommended that you do not conduct a surprise exercise as this can cause confusion and anxiety, and
  + advise the neighbours of the date and time of the exercise to ensure they understand it is only an exercise.

## Other planning considerations

It may or may not be appropriate for people with a disability to participate in the evacuation drills. Staff are the best people to make a judgement about the appropriateness of including people with a disability in exercises or drills.

All staff, including casuals, need to participate in one evacuation exercise per year. If staff are unable to attend, they may participate in alternative evacuation exercises in consultation with their supervisor.

Other types of evacuation exercises include:

* tabletop
* walk through evacuation, and
  + field evacuation.

When planning a practice evacuation exercise you should also:

* ensure that a supervisor is present to observe your exercise and provide feedback on the procedures that were implemented
* hold a briefing before the exercise to ensure that all participants know their roles and the exercise schedule
* identify the location of the correct primary and secondary assembly points
* provide demonstrations of the various rescue techniques and any specialised emergency evacuation equipment that has been installed
* outline the communication procedures to contact relevant agencies, and
  + allow at least 4-6 weeks lead time before an exercise.

## The exercise

On the day of your exercise you will need to ensure:

* everyone is available to participate
* the briefing is held on time
* any equipment or resources planned to be used during the exercise are available and ready
* observers are ready, and
  + checklists are available.

It is important that the exercise be initiated on time and that you use the schedule as a guide to keep the exercise on track.

When you are satisfied that the objectives have been achieved or time has run out, announce the “all clear” to end the exercise.

## Debrief

Conduct your debrief which should include, staff, observers and emergency services if they attend. The purpose of the debrief is to:

* identify any problems with the procedures
* review roles and responsibilities
* evaluate the alerting and communications systems and procedures, and
  + evaluate the effectiveness of the exercise.

Click on the link to access a checklist that has been developed to assist you to measure how effective the emergency evacuation exercise was conducted, and additional suggestions for conducting exercises.

[Evacuation checklist](https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation)  < https://providers.dhhs.vic.gov.au/fire-safety-induction-program-24-hour-supported-accommodation>

## Activity: Effectively planning an exercise

**In this activity you’ll need to identify examples of steps to take to effectively plan an emergency evacuation exercise.**

|  |  |
| --- | --- |
| Provide demonstrations of the various rescue techniques and any specialised emergency evacuation equipment |  |
| Allow a lead time of between one and two weeks before the exercise |  |
| Always include people with a disability in the exercises |  |
| Identify the objectives of the exercise |  |
| Identify the location if the correct primary and secondary assembly points |  |
| Always plan to conduct the exercise at night |  |
| Advise the neighbours of the date and time of exercise |  |
| Conduct surprise exercise to test the residents response times |  |
| Discuss with the other staff, the type of emergency and the scenario you want to test your procedures against |  |

## Assessment: Emergency evacuation exercises

You should now have a good understanding about the information in this part of the program.

Before we move on you'll need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

**A debrief following a practical exercise has which three of the following purposes?**

|  |  |
| --- | --- |
| To remove the need for any further practical exercises for at least 5 years |  |
| To identify any problems with the procedures |  |
| To determine staff’s suitability for annual bonuses |  |
| To review roles and responsibilities |  |
| To eliminate the need for alerting and communications systems and procedures |  |
| To evaluate the effectiveness of the exercise |  |

**Conduct surprise exercises to test residents’ response times.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**Staff are the best people to make a judgement about the appropriateness of including people with a disability in exercises/drills.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**Emergency services generally require how much notice to attend a practice exercise?**

|  |  |
| --- | --- |
| 10 - 12 weeks |  |
| 5 working days |  |
| 1 week |  |
| 15 to 20 weeks |  |

**When planning a practice evacuation exercise you should take which three of the following steps?**

|  |  |
| --- | --- |
| Decide how everyone will be told about the exercise |  |
| Advise the neighbours of the date and time of the exercise |  |
| Always schedule it to occur on a weekend |  |
| Avoid consultation with staff and focus on the residents themselves |  |
| Identify the objectives of the exercise |  |

# Portable fire extinguishers and fire blankets

In this part of the program we take a look at how to identify and use portable fire equipment installed in 24 hour residential facilities.

## Aims and objectives

To be able to identify and use portable fire equipment installed in disability residences we need to look at:

* how to assess an emergency situation and the likely effectiveness of first attack equipment
* how to identify a dry chemical powder extinguisher
* how to use a portable fire extinguisher and fire blankets
* the limitations of a portable fire extinguisher in relation to time duration
* the actions to take when a portable fire extinguisher needs recharging or repairs, and
  + the procedures to be followed after emergency equipment is used.

## Portable fire extinguishers

Nearly all fires begin as small fires and may be easily extinguished if discovered early enough and the correct extinguishing agent is applied.

The type of portable fire extinguisher installed in your residential facility should be a dry chemical powder portable extinguisher 2.1kg with a rating of 2A 20(E), manufactured to AS/NZS1841.5. It is:

* coloured red with a horizontal white band
* will last you approximately 16-20 seconds, and
  + can be used on most types of fire.

## Contents

Portable fire extinguishers provide a valuable medium for attacking fire situations when staff are present and it’s possible to respond in the early stages of the fire. Nothing contained in the extinguisher will harm you, although it is recommended that you do not remain in the dust cloud created when it’s used.

## Dry chemical powder fire extinguisher

The dry chemical powder fire extinguisher recommended for your residential facility can be used on the following types of fires:

* wood
* paper
* furnishings
* electrical equipment, and
  + flammable liquids, such as petrol

It is designed to be used on small fires only. When a fire has developed unnoticed beyond the initial stage, and/or where the fire is rapidly growing, you should not attempt to extinguish the fire. Do not attempt to extinguish any fire bigger than 1m3 (cubic meter).

## Activity: What should this extinguisher be used for?

In this activity you’ll need to identify the below examples of the types of fires that a dry chemical powder fire extinguisher can be used for.

|  |  |
| --- | --- |
| Paper fires |  |
| Large fires |  |
| Fires caused by furnishings |  |
| Fires caused by flammable liquids |  |
| Fires caused by electrical equipment |  |
| Wood fires |  |

## Where the fire has spread

In cases where the fire has spread, close the door to that room and evacuate all persons immediately and call the Fire Brigade on 000 (triple zero).

## Attacking the fire

When attacking a fire, take up a position where access to the fire is unrestricted. It is important that you have a quick and safe exit point at all times. Do not allow the fire to cut off your exit route. This means you must always be between the fire and your exit point.

Crouching low will protect you from smoke and heat.

It is vital to remember that if you experience any difficulties at any time, evacuate immediately. The safety of all occupants should be your only priority.

## PASS

You should know the PASS acronym for using portable fire extinguishers:

**P -** Pull the pin

**A -** Aim the extinguisher at the base of the fire

**S -** Squeeze the handles to release the extinguishing agent

**S -** Sweep the extinguisher from side to side at the base of the fire until the extinguishing agent is used. Remember use the whole contents of the extinguisher on the fire and do not stop or start the extinguisher. Empty the full contents onto the fire.

## Fire blankets

Each residential facility should be fitted with at least one fire blanket manufactured to AS/NZS3504. They can be utilised for small stove fires or if someone’s clothes are on fire.  
For stovetop fire extinguishment:

* remove the blanket from its storage case
* grip the two straps attached to the fire blanket
* hold the blanket at arm’s length
* approach the fire cautiously
* gently place the blanket over the fire, do not lean over the burning object, and
  + isolate the source of heat.

### Using fire blankets

The remaining steps when using a fire blanket to extinguish stovetop fires are to:

* leave the blanket on the pot and allow it to cool
* call the fire brigade 000 (triple zero) so they can check that the fire has not spread to roof spaces and or wall cavities, and
  + not remove the pot or burning object but leave it on the stove.

For clothing fires, instruct the person to ‘Stop Drop and Roll’, deploy the blanket laying it over the top of the person ‘patting out’ the flames. The person should always be advised to lie down as this reduces clothing fire spread.

### Use only once

Fire blankets are designed to be used once only on small fires and should be disposed of after use and a new one installed.

Fire blankets should be located where you can easily access them in an emergency. They should not be next to the stove, but placed near an exit door in the kitchen.

## Activity: Using the fire blanket correctly

You are in a kitchen and pot catches fire. There is a fire blanket located near an exit door.

**Which of the following are correct responses to this scenario?**

|  |  |
| --- | --- |
| Remove the blanket from its storage case |  |
| Gently place the blanket over the pot |  |
| Turn off the source of heat and leave the blanket on the pot |  |
| Lean as close as you can to the burning pot |  |
| Hold the blanket close to your body |  |
| Grip the two straps attached to the fire blanket |  |
| Hold the blanket at arm’s length |  |
| Approach the fire cautiously |  |
| Call the fire brigade and leave the pot on the stove |  |

## What to do if anyone’s clothes catch fire

If anyone’s clothes catch fire:

* **STOP** – them immediately – do not let them run
* **DROP** – them to the floor, and
  + **ROLL** – smother the flames either by rolling the person or wrapping them with a fire blanket.

## General tips

When you use a portable fire extinguisher or fire blanket, arrange for its immediate replacement. Clearly mark or identify it as being used. Do not place a used portable fire extinguisher or fire blanket back in its assigned location.

All portable fire extinguishers and fire blankets should be located in a readily accessible position. The preferred location is adjacent to an exit path or door. All equipment should be kept clear from any obstruction.

Ensure the fire extinguisher is ready to use by checking the indicator on the pressure gauge is in the green section. All equipment should be regularly maintained and serviced by qualified fire service technicians.

Staff should be mindful that people with breathing difficulties may be affected by the contents of the dry chemical powder extinguisher if they are in the room. Read the manufacturer’s operating instructions.

## Assessment: Portable fire extinguishers and fire blankets

You should now have a good understanding about the information in this part of the program.

Before we move on you'll need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

**How long will your fire extinguisher last after you start using it?**

|  |  |
| --- | --- |
| One minute |  |
| 90 seconds |  |
| 20 seconds |  |
| 40 seconds |  |

**What type of extinguisher is recommended for your residential facility?**

|  |  |
| --- | --- |
| 2.5kg, electrical extinguisher |  |
| 3kg water extinguisher |  |
| 2.1kg 2A 20(E) type, portable dry chemical powder fire extinguisher |  |

**What colour is the portable dry chemical powder fire extinguisher?**

|  |  |
| --- | --- |
| Red |  |
| Red & Black |  |
| Red & Yellow |  |
| Yellow |  |
| Red & White |  |

**On what type of fires can you use a dry chemical powder extinguisher with a 2A 20B (E) rating?**

|  |  |
| --- | --- |
| Wood and paper only |  |
| Electrical and wood only |  |
| Wood, paper, furnishings, electrical equipment, flammable liquids and cooking oil |  |
| Oil and gas only |  |

**Where should the fire extinguisher be located?**

|  |  |
| --- | --- |
| By the front door only |  |
| On the kitchen wall, near the door |  |
| In each bedroom |  |

**When is it safe to use first attack equipment?**

|  |  |
| --- | --- |
| When the fire is small, for example when its contained to a small pot |  |
| In any circumstances |  |
| When the fire is bigger than a 1m3 |  |

**What does PASS stand for?**

|  |  |
| --- | --- |
| P = Pull the pin, A = Aim the extinguisher, S = Squeeze the handle, S = Sweep the extinguisher from side to side |  |
| P = Point the extinguisher, A = Aim close to base of fire, S = Squeeze handle, S = Sweep the extinguisher from side to side |  |
| P = Pull the pin, A = Aim the extinguisher, S = Squeeze the handle, S = Suffocate flames |  |

**Once you have used a fire blanket or extinguisher**

* + - Mark or identify it as being used.
    - Report it as being used immediately (to your line supervisor/manager on duty)
    - Do not place a used portable fire extinguisher or fire blanket back in its assigned location.

|  |  |
| --- | --- |
| True |  |
| False |  |

**What should you do if a fire becomes bigger while using an extinguisher or fire blanket?**

|  |  |
| --- | --- |
| Evacuate |  |
| Continue applying extinguishing agent until the extinguisher is empty |  |
| Try and find additional extinguishers or blankets to use |  |

**To use a fire blanket, you:**

* + - Remove it from its storage case.
    - Grip the two straps attached to fire blanket.
    - Hold fire blanket at arm’s length.
    - Approach fire cautiously.
    - Gently place the fire blanket over the fire.
    - Turn off the heat source.
    - Leave the fire blanket on pot and allow to cool.
    - Call the fire brigade to ensure the fire did not spread to other areas (i.e. roof spaces).

|  |  |
| --- | --- |
| True |  |
| False |  |

**An extinguisher should be replaced when the pressure level is:**

|  |  |
| --- | --- |
| Less than 10 |  |
| Outside the green area |  |
| Less than 10 or more than 25 |  |

# Other fire emergencies

Other fire emergencies, such as bushfires, may occur outside 24-hour residential facilities.

## Section overview

This section is intended primarily for staff who may be in a rural setting, but it’s also relevant to staff who work residential facilities located on the urban fringe near high levels of materials that can fuel a bushfire. In it, we’ll learn about:

* special considerations for bushfire prevention around the residential facility
* the steps that need to be taken when a bushfire approaches and has passed
* the steps to take when caught in a bushfire while driving a car, and
  + any special equipment that may be required.

## Bushfires and grass fires preparation

Staff who are located in or are required to travel in the country, or are rostered on to work in a rural setting must be aware of bushfire and grass fire risks.

The chance of losing life and property during a bushfire is influenced by:

* the location and accessibility of the property
* the amount and type of surrounding vegetation
* the condition and placement of buildings
* the availability of water, and
  + the physical capabilities of people with a disability.

## Total fire ban days

Total fire ban days are when fires are likely to spread rapidly and could be difficult to control. It is recommended that on these days, plans should be in place to ensure all occupants can be evacuated quickly and easily should a fire occur in your area.

It is very important that local emergency services, that is the fire brigade and police, know of your plans and the evacuation requirements of all occupants of the residential facility or site.

## Fire danger ratings

Fire danger ratings tell you how dangerous a fire would be if one started. From most dangerous to least, the ratings are:

* Code Red
* Extreme
* Severe
* Very High
* High, and
  + Low-Moderate

It is important to know what to do on high risk weather days. Click the link below to learn more.

[Fire danger ratings](http://www.cfa.vic.gov.au/warnings-restrictions/about-fire-danger-ratings/) < http://www.cfa.vic.gov.au/warnings-restrictions/about-fire-danger-ratings/>

## Appropriate clothing

Wearing appropriate clothing is important. Exposed skin may burn and needs protection from radiant heat. All occupants must wear clothing made of fire resistant materials and ensure that arms and legs are adequately covered. Nylon and synthetic clothing are not suitable.

## Specialised equipment

Residential facilities in rural areas may have a fire pump fitted. These should be connected to either a water tank or dam water supplies. Staff should be fully conversant with the operation of these pumps and must:

* make sure pumps are serviced in accordance with the manufacturer’s recommendations
* ensure tanks have water in them, especially during summer
* ensure pumps are fuelled, and spare fuel and parts are available
* have the pumps operated at regular intervals, and
  + have the correct clothing to go outside during a bush or grass fire.

## Detailed bushfire survival plan

Your residential facility may have a detailed bushfire survival plan. This includes the location of designated refuge areas. Your supervisor can find out the location of the nearest one by consulting your local Municipal Council or Municipal Emergency Resources Officer (MERO).

Information and advice can also be obtained from the Country Fire Authority (CFA).

If you live in a rural area a bushfire checklist has been prepared for your use.

Click the link below to view the checklist.

**Bushfire Survival Plan**

## Action to be taken in bushfires or grass fires

If you are caught in a bushfire or grass fire and you are on foot, walk across and downhill. Try to get around and behind the fire. Keep your eyes open for any possible refuges to protect yourself from radiant heat, such as:

* running streams or pools
* eroded gullies free of scrub
* holes made by fallen trees and
  + man-made structures such as pipes or train bridges.

If you find a good refuge, stay there and wait for the fire to pass.

## Radiant heat is the killer

Radiant heat is the main killer in a bushfire. Radiant heat is heat transmitted in all directions from a fire. Protection from radiant heat is obtained by shielding with solid non-transparent materials.

Make do with the best available option. If possible, lie down in a depression behind a log or large rock and cover yourself with:

* clothing over exposed skin, but not nylon
* sheets of bark
* slabs of wood
* soft earth, and or
  + anything to shield you from the heat.

## As a last resort

As a last resort, you may need to run through the fire onto the burnt ground.

Choose a place where fuel is sparse; which is free of obstructions and where there is or will be little burning material on the ground behind the fire front.

Wait for a lull and breathe close to the ground for the purest and coolest air.

## Activity: Radiant heat is the killer

In this activity you’ll need to identify multiple correct responses in a scenario that explores how to react to being in a fire trap.

Marie is walking near a rural 24 hour residential facility when she becomes trapped by a bushfire. She notices the presence and increasing strength of radiant heat and, being aware of its dangers, decides to shield herself.

**Which three of the following are the correct responses?**

|  |  |
| --- | --- |
| Breathe from the highest point possible |  |
| Lie in a depression |  |
| Cover exposed skin with any item of clothing available |  |
| Run towards burnt ground |  |
| Cover the body with soft earth |  |

## Avoid bushfire danger

If you’re planning to drive through a forest area, consider whether your journey is really necessary. Try to leave and return early, as afternoons and evenings are the danger periods.

If you approach a bushfire and smoke is across the road, slow down at once. Do not drive through smoke when visibility is severely impaired.

Wait for someone to come through from the other side who can give you the all clear.

Drive slowly, switch on your headlights and watch out for:

* firefighting vehicles or personnel on the road, and
  + fallen trees across the road.

## Trapped in a car

If you become trapped in a fire when driving,**do not leave the car!**

Park in the best area of bare ground available, such as:

* against an embankment in a cutting
* in a gravel pit or roadside clearing, or
* in areas with the least amount of scrub alongside, but
  + never park under trees.

You must:

* turn lights on
* close all windows and vents
* lie down on the floor below window level
* shield yourself from radiant heat, with a woollen blanket or thick clothing, and
  + stay in your car until the fire front has passed.

## Activity: Trapped in a car

Place the steps you must follow if you become trapped in a car during a bush or grass fire in order from the first recommended step to the last.

|  |  |
| --- | --- |
| Close all windows and vents |  |
| Park in an area of bare ground |  |
| Shield yourself from radiant heat |  |
| Turn lights on |  |
| Stay in the car until the fire front has passed |  |
| Lie down on the floor below window level |  |

## Remember

In a bushfire, remember:

* to avoid bushfire danger
* to not panic
* to not try to outrun the fire
* radiant heat is the main killer, and
  + vehicle fuel tanks exploding or catching fire are incredibly rare events.

If your home is located in bushland areas, it’s important that you contact your local fire brigade to obtain advice on how to best prepare your residential facility for the bushfire season.

## Car Fires

Car fires occur because of two reasons, these are:

* electrical – such as a short circuit in the electrical wiring, and
  + fuel fire – such as damage to the fuel system which allows fuel to leak and catch fire.

If you can smell smoke or burning type fumes, stop the vehicle, switch off the engine and check the source. Report the fault immediately to repair any faults and prevent fires.

### Electrical

The most common location for an electrical fire is under the dashboard or in the engine compartment. If this occurs:

* turn off the ignition
* put the car in gear with the handbrake on
* close the windows
* disconnect the battery, if safe and you know how to
* evacuate
* close the doors
* contact the fire brigade
* keep the area clear, and
  + divert traffic as necessary, if safe to do so.

The order in which these steps occur may change depending upon the circumstances of the emergency.

### Fuel leak and threat of explosion

Fuel leaking from a vehicle is extremely hazardous. The threat of fire requires your immediate attention. Fuel will leak due to damage to the fuel tank and pipes because of wear and tear or because of a motor vehicle accident. If a leak occurs and you can smell petrol, you must:

* turn off the ignition
* evacuate immediately
* raise the alarm
* contact the fire brigade
* keep areas clear, and
  + divert traffic as necessary.

## Car safety items

The following equipment should always be carried in your car when travelling in the country:

* a water bottle
* a phone
* a large woollen blanket, and
  + a First Aid Kit.

## Assessment: Other fire emergencies

You should now have a good understanding of:

* bushfire prevention around the residential facility
* steps needed to take when a bushfire approaches and has passed
* steps to take when caught in a bushfire while driving a car, and
  + any special equipment that may be required.

To finish off, you need to complete a short multiple-choice assessment. You'll need to pass it to complete the program.

**What precautions should you take when you drive into smoke from a bush or grass fire?**

|  |  |
| --- | --- |
| Slow down, switch on headlights and watch out for other vehicles, people or objects (including the fire brigade) |  |
| Drive quickly through smoke, so your visibility is only limited for a short time. |  |
| Do not drive through smoke under any circumstances |  |

**What type of heat is the main killer in a bushfire?**

|  |  |
| --- | --- |
| Radiant heat |  |
| Direct burning |  |
| Conducted heat |  |
| Convection heat |  |

**What safety equipment items should you carry in your car?**

|  |  |
| --- | --- |
| First Aid kit, fire extinguisher and breathing mask |  |
| Large woollen blanket, water bottle, phone and first aid kit |  |
| First aid kit, map of the area or compass and a breathing mask |  |

**You should get out of your car if caught in a bush/grass fire.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**What types of fires are more likely in a rural setting?**

|  |  |
| --- | --- |
| Bushfires, chemical spills and electrical fires |  |
| Bushfires, grass fires and car fires |  |
| Bushfires, grass fires and chemical spills |  |

**What should you make sure is always full of water during summer?**

|  |  |
| --- | --- |
| Bathtub |  |
| Sinks |  |
| Water tank |  |

**When caught in a bush/grass fire, you should try to park your car on the barest ground available.**

|  |  |
| --- | --- |
| True |  |
| False |  |

**What is the best way to protect yourself from radiant heat in a bushfire?**

|  |  |
| --- | --- |
| Wet yourself down, or jump in a pool or dam |  |
| Wear as little as possible so you don’t get too hot |  |
| Cover yourself with clothing, sheets of bark or soft earth, or lie down behind a log or large rock |  |

**Who should you contact for more information regarding rural fire safety?**

|  |  |
| --- | --- |
| MFB |  |
| Country Fire Authority (CFA) |  |
| Neighbouring properties |  |

**What are two types of car fires you can experience?**

|  |  |
| --- | --- |
| Electrical fire, fuel fire |  |
| Gas fire, chemical fire |  |
| Electrical fire, paper fire |  |

# Marking Record

I declare that this assignment is my own work no part of it has been copied from any other colleagues work or from any other source.

I have made a photocopy or electronic copy of my workbook, which I can produce if the original is misplaced.

|  |  |
| --- | --- |
| **Participant name:** |  |
| **Participant signature:** |  |
| **Date:** |  |
| **Assessor name:** |  |
| **Assessor Signature:** |  |
| **Date:** |  |
| **Competent / Not Competent** |  |
| **Assessors comments:** |  |
| **Participant informed of result:** |  |