

Consumer Factsheet

Fire Safety - Smoke Alarms

PEER
REVIEWED

The purpose of this factsheet is to assist people to better protect themselves in a home fire, by having effective smoke alarms. A fire can spread very fast through a home. You need to be quickly alerted by your smoke alarms if there is a fire, so you can safely escape.

Do I need to have smoke alarms?

In Australia, the Building Code requires mains-powered (hard-wired) smoke alarms in all houses, units and apartments, built since 1997. From 2014, smoke alarms in new homes also need to be interconnected. This means that if one smoke alarm detects smoke, every smoke alarm in the home will sound an alarm. For homes built before 1997, most of Australia has laws requiring smoke alarms. However, each state and territory has their own laws for the type of smoke alarms to be used.

Fire services and researchers advise that all homes, even those built before 1997, should have the smoke alarms required by the Australian Building Code since 2014. They even recommend additional smoke alarms be installed for safety.

Where in my home do the smoke alarms need to be?

A smoke alarm is needed at least:

- **between each group of bedrooms and the rest of your home**
- **on each storey of your home without bedrooms, on the most likely route of escape**

During the day, the sound of a smoke alarm can seem very loud. However, research has shown that some people are not woken up quickly enough by the sound of a smoke alarm when they are in a deep sleep. These people include children and the elderly, people with hearing impairment, and people affected by medications, drugs and alcohol.

Fire services and researchers recommend that homes also have a smoke alarm:

- **in each bedroom**
so it is more likely the sound of the alarm will wake up a person sleeping
- **in living areas**
so it is more likely the sound of the alarm will be heard over daytime noise

There can be a higher risk of fire in these areas from electrical equipment. The bedroom, living room and kitchen are where most harmful fires occur.

Fire researchers recommend that homes have a smoke alarm in each area of the home that has a higher risk of fire, where there is a lot of electrical equipment or where heaters are often used. Fire services advise not having a smoke alarm in the kitchen. In kitchens and other areas of the home where false alarms from smoke alarms are more likely, heat alarms are an option.

What are interconnected smoke alarms?

Interconnected smoke alarms means that when one smoke alarm in your home detects smoke, every smoke alarm will sound an alarm. This alerts you to a fire more quickly, because you can hear the alarm nearest to you as soon as any smoke alarm in your home detects smoke. It can help you to wake up and escape a fire before the smoke reaches you. Interconnected smoke alarms are very important when fires start near people who need assistance to wake up and escape. They include children, the elderly, and people with disability.

New homes (since 2014) must have hard-wired smoke alarms interconnected. In existing homes, wiring all smoke alarms together can be difficult, especially if you don't have access to space above the ceiling to put the electrical wires. However, smoke alarms can be interconnected wirelessly through radio-frequency (RF). You can replace your hard-wired smoke alarms with RF-linked hard-wired smoke alarms. If you have battery-powered smoke alarms or need to add extra smoke alarms, you can use battery-powered RF-linked smoke alarms.

If you have a lot of interconnected smoke alarms in your home, or you have smoke alarms on different storeys, you might need to know which smoke alarm is detecting smoke. An 'activated alarm locator' switch will turn off all alarms for a short time except the one detecting smoke. This can help you plan your escape or identify if it is a false alarm.

What type of smoke alarms do I need?

Australian fire services and researchers recommend that homes have **photoelectric** smoke alarms. They are better at detecting smouldering fires that create a lot of smoke. Smouldering fires are the most common type of home fire, and harm the most people.

Many homes will have **ionisation** alarms because they used to be the most common and least expensive smoke alarms. Ionisation alarms are good at detecting fast, clean fires, but not as quick to detect smouldering fires. If you have ionisation alarms, you should replace them with photoelectric smoke alarms as soon as you can. If you can't replace them all straight away, put photoelectric smoke alarms at least in the bedrooms, and change the others when you can.

How can I stop annoying false alarms?

Sometimes smoke alarms will give a false alarm when there isn't a fire, because of cooking or dust. This can be annoying and lead to some people disconnecting their smoke alarm or its battery. Disconnecting a smoke alarm or its battery is very dangerous. In some home fires where people have been injured or died, smoke alarms had been installed but were not operating. This was usually because the smoke alarm was disconnected or the battery was disconnected or flat.

Photoelectric smoke alarms are less likely to give false alarms. However, if you have a smoke alarm close to a cooking appliance, the alarm can still be activated by smoke or a lot of steam. In these areas you could use a heat alarm instead. Heat alarms detect very high temperatures or very fast increases in temperature, rather than smoke.

If you need to silence an alarm, some smoke alarms have a 'hush' button. Pressing the hush button will stop the alarm sound for a few minutes. This gives time for the steam or smoke to clear when there isn't a fire. The hush button is usually gently pressed with a broom handle or another long object that can reach the smoke alarm. If the smoke alarm is difficult for you to reach, there are alternatives. Some smoke alarms can be silenced by pressing a hush button on a remote control or installed on a wall.

Do smoke alarms need to be maintained or replaced?

Smoke alarms have a service life of 10 years. After this time they must be replaced. Smoke alarms need to be maintained to make sure they will work properly in a fire. There are three types of regular maintenance:

- **replacing batteries**
 - all replaceable batteries (including back-up batteries in hard-wired smoke alarms) need to be replaced at least every year
 - if it is difficult for you to replace the batteries in the smoke alarm, there are sealed smoke alarms with 10-year batteries that never need replacing
- **testing**
 - smoke alarms should be tested according to the manufacturer's instructions
 - testing is usually needed at least every month
 - all smoke alarms have a test button located on the cover, which is usually pressed with a broom handle or other long object that can reach the smoke alarm
 - if it is difficult for you to reach the test button on the smoke alarm, there are some smoke alarms that can have a test button on a remote control or installed on a wall
- **cleaning**
 - smoke alarms should be cleaned according to the manufacturer's instructions.
 - a vacuum cleaner or soft brush can usually be used to remove dust from around the outside of the smoke alarm
 - cleaning is needed at least every year, but should be done every month.

Smoke Alarm Checklist

Is there a smoke alarm

- ☐ between each group of bedrooms and the rest of your home?
 - ☐ on each storey of your home without bedrooms, on the most likely route of escape?
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Detecting smoke and alerting you more quickly

Is there a smoke alarm

- ☐ in each bedroom?
- ☐ in the living areas?
- ☐ in each other area of your home that has a higher risk of fire?

If you or others at home are at risk of not being woken up by smoke alarms,

- ☐ can you get supplementary vibrating, flashing, or special sounding alarms, that activate when the smoke alarm sounds?
 - ☐ can you get help with the cost of these alarms from programs in your state?
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- ☐ Is each of the smoke alarms interconnected with others?

If you have many interconnected smoke alarms or a multi-storey dwelling,

- ☐ can you get an 'activated alarm locator' to identify which alarm has detected smoke?
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More reliable smoke detection, fewer problems with false alarms

- ☐ Are your smoke alarms photoelectric?

If you can't change to photoelectric alarms yet,

- ☐ can you install photoelectric smoke alarms in bedrooms now?

- ☐ Is the most suitable type of smoke alarm or other type of fire alarm used for each area of your home, to avoid nuisance alarms, e.g. heat alarm near cooking appliances?
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- ☐ Are you able to easily silence false alarms from your smoke alarms, with a 'hush' button?

If you or others in your home have difficulty silencing false alarms,

- ☐ can you install smoke alarms that have a large hush button, OR
- ☐ can you install smoke alarms that can be silenced with a hush button on a remote control, or a hush button that is installed on the wall?

Making sure smoke alarms will work properly in a fire

Are your smoke alarms

- ☐ less than 10 years old (from the manufacturing date printed on the smoke alarm)?
 - ☐ connected to power (either battery power or mains power with back-up battery)?
 - ☐ working with the batteries charged?
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Are you or someone else in your home maintaining your smoke alarms by

- ☐ replacing all batteries in smoke alarms each year, unless the smoke alarms are sealed with a 10-year battery?

If you and others at home have difficulty replacing batteries in your smoke alarms,

- ☐ can friends or family replace batteries, OR
- ☐ are there assistance programs in your area that can replace batteries for you, OR
- ☐ can your smoke alarms that have removable batteries be replaced with sealed smoke alarms that have 10-year lithium batteries?

- ☐ cleaning the smoke alarms according to manufacturer's instructions, each month and as needed?

If you and others at home have difficulty cleaning your smoke alarms,

- ☐ can friends or family clean smoke alarms, OR
- ☐ are there assistance programs in your area that can help you clean smoke alarms?

- ☐ testing the smoke alarms' batteries and alarm sound according to manufacturer's instructions, at least each month?

If you and others at home have difficulty testing your smoke alarms,

- ☐ can friends or family test smoke alarms, OR
- ☐ are there assistance programs in your area that can test smoke alarms for you, OR
- ☐ can your smoke alarms be replaced with smoke alarms that can be tested with a remote control, or a test button that is installed on the wall?

Escaping a fire

- ☐ Do you and others in your home have a plan for escape when the smoke alarm sounds?

If you or others at home have difficulty being woken up by a smoke alarm, or would need assistance to escape your home in a fire,

- ☐ can you ask your local fire brigade about where to put your smoke alarms and the best way to escape your home?

If you live alone, and would need assistance to wake up when a smoke alarm sounds, and to escape your home in a fire,

- ☐ can you interconnect smoke alarms to the neighbouring home of a carer or friend?
- ☐ can you have interconnected smoke alarms monitored as part of an emergency call or security alarm system?

If you or others at home would need extra light to safely escape your home in a fire,

- ☐ can the smoke alarms on your escape route be replaced with smoke alarms that contain an emergency light, OR
- ☐ can your smoke alarms on the escape route be linked to emergency lighting that activates when the smoke alarm sounds?

Where can I find more information?

- The HMinfo *Summary Bulletin: Fire Safety – Smoke Alarms 2nd ed.*, available from the www.homemods.info website
- Your local Fire Brigade and the Fire Services website for your state or territory:
 - ACT:** ACT Fire & Rescue - esa.act.gov.au/actfr
 - NSW:** Fire & Rescue NSW - www.fire.nsw.gov.au
 - QLD:** Queensland Fire and Emergency Services - www.fire.qld.gov.au
 - NT:** Northern Territory Fire and Rescue Service - www.pfes.nt.gov.au/Fire-and-Rescue
 - WA:** Department of Fire & Emergency Services - www.dfes.wa.gov.au
 - SA:** South Australian Metropolitan Fire Service - www.mfs.sa.gov.au
 - VIC:** MFB - www.mfb.vic.gov.au
 - TAS:** Tasmania Fire Service - www.fire.tas.gov.au
- Other fire safety and home modification resources on the www.homemods.info website

***This information was correct at time of printing.*