
Smoke and portable indoor air cleaners

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What is smoke?

Smoke is a collection of airborne particles, usually from fire. Smoke in the air is a complex mixture of:

- different size particles
- water vapour
- gases – including carbon monoxide, nitrogen oxides and volatile organic compounds.

Fine particles in smoke can cause irritation and inflammation when breathed in.

How to reduce smoke in your home

Many Australian homes are not designed to stop smoke entering through doors, windows and other small openings. When smoke gets inside your home it can make your indoor air unhealthy.

To reduce the amount of smoke entering your home:

- seal gaps under doors or around windows and wall vents with towels, blankets or plastic
- avoid other sources of indoor air pollution such as smoking, burning candles, using woodstoves, or stirring up fine dust by sweeping or vacuuming.

If smoke has entered your home, you can:

- ventilate your home by opening windows and doors when outside air quality has improved; or
- use a portable indoor air cleaner.

What are portable indoor air cleaners?

Portable indoor air cleaners are self-contained appliances that remove particles from indoor air using filtration. They will be most effective in an area of the home that can be well sealed.

Although studies conducted overseas have found these devices to be useful, there is currently no evidence to show how effectively they work in Australian homes.

Who can benefit from a portable indoor air cleaner?

People who may benefit most from portable air cleaners are:

- anyone who is sensitive to the effects of smoke
- anyone over 65 years
- children 14 years and younger
- pregnant women
- anyone with heart or lung conditions, including asthma.

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Environment Protection Authority Victoria
GPO Box 4395, Melbourne VIC 3001
1300 372 842



What to consider when buying and operating a portable indoor air cleaner

Consider the following when buying, operating and maintaining a portable indoor air cleaner:

- Use a portable indoor air cleaner equipped with a True HEPA (high-efficiency particulate air) filter to effectively remove particles from the indoor air.
- Humidifiers, negative ion generators and odour absorbers do not reduce indoor air pollution.
- Portable air cleaners are more effective in rooms smaller than the maximum room size specified by the manufacturer (generally specified in m² or square metres). Rooms with high ceilings may require a larger unit than their floor size would suggest. Consider using multiple air cleaners if the only suitable room is larger than the maximum size for a single unit.
- Ensure the portable air cleaner is set up and operated according to the manufacturer's instructions – this may include correctly installing the HEPA filter by removing it from its plastic protective covering.
- Operate the portable air cleaner in a well-sealed room with the doors and windows closed. Seal gaps where smoke may enter the home (e.g. around window frames and under doors) if possible. Minimise the amount of people going in and out of the room.
- Operate the portable air cleaner continuously on a high fan speed. This will increase the amount of air filtered.
- Operate the portable air cleaner away from objects that may restrict air flow. Consider removing unnecessary furnishings or objects from the room that may restrict air flow.

- Replace the HEPA filter according to the manufacturer's instructions so the portable air cleaner remains effective. Take care when removing and disposing of the used filter so you don't breathe in trapped particles.



Further information and updates

Contact EPA on 1300 372 842
or epa.vic.gov.au

- Incident information and updates: emergency.vic.gov.au
- Up-to-date air quality information: epa.vic.gov.au/airwatch
- Information about the impacts of smoke: epa.vic.gov.au/smoke
- NURSE-ON-CALL: 1300 60 60 24
- Emergency information: epa.vic.gov.au/our-work/emergency-information
- Further information on rainwater tanks is available from the Department of Health and Human Services on betterhealth.vic.gov.au



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GPO Box 4395, Melbourne VIC 3001
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