

## Bushfire Smoke

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### Introduction

Bushfire smoke contains particles of different sizes, water vapour and gases, including carbon monoxide, carbon dioxide and nitrogen oxides. The larger-sized particles are visible to the eye and contain burning debris, leaves etc. They are generally too large to be breathed deep into the lungs but can cause irritation to the lungs, throat and nose. In comparison, the finer particles (1/30th the width of an average human hair) and gases are small enough to breathe deep into the lungs and can affect health.

### Public health significance

Children, the elderly, smokers and people with heart or lung conditions (including asthma) are more sensitive to the effects of breathing in fine particles generated by bushfire smoke.

### Action to take

To minimise possible health impacts during a bushfire smoke event consider:

- Minimising the amount of physical activity outdoors. People with pre-existing lung or heart conditions in particular, should rest as much as possible and keep away from the smoke.
- When indoors, keep windows and doors closed. If you have an air conditioner, turn it on and switch it to "recycle or recirculate".
- If you do not have an air-conditioner, take steps to reduce heat stress, especially in the very young, people who are unwell, or the elderly.
- If your home gets too hot to be comfortable, or is letting in a lot of outside air, try to take an air conditioned break at a local community library or shopping centre.
- When indoors, avoid other sources of air pollution as much as possible, including smoke from cigarettes, woodstoves, burning candles or using unflued gas appliances.
- If there is a break in smoky conditions, take the opportunity to air out your home to improve indoor air quality.
- Anyone with a lung or heart condition should keep at least five days supply of medication on hand. Those with asthma should follow their personal asthma plan.
- Anyone experiencing breathing problems or chest pain should seek medical advice immediately.
- Listen to your local radio station or watch television for updates on fire and smoke conditions in the area.
- When smoke conditions become 'hazardous', everyone should rest indoors and avoid outdoor activity as much as possible. Outdoor sporting events should be postponed. Sensitive individuals should consider temporarily moving away from the smoke-affected area and stay with a friend or relative.

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### Acknowledgement:

Information for this document was sourced from the Environmental Health Unit, Victorian Government Department of Human Services Dec 2005.

### Related links:

- Queensland Fire & Rescue Services (QFRS) at website: [www.fire.qld.gov.au/communitysafety/bushfire/default.asp](http://www.fire.qld.gov.au/communitysafety/bushfire/default.asp)
- Emergency Management Queensland (EMQ) at website: [www.emergency.qld.gov.au/emq/css/beprepared.asp](http://www.emergency.qld.gov.au/emq/css/beprepared.asp)
- Emergency Management Australia Community Awareness Publications at website: [www.ema.gov.au/www/emaweb/emaweb.nsf/Page/Publications](http://www.ema.gov.au/www/emaweb/emaweb.nsf/Page/Publications)
- Environmental Protection Agency at website: [www.epa.qld.gov.au/](http://www.epa.qld.gov.au/)