

# Air Pollution Fact Sheet



A MAXSOLUTIONS Company

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## Health effects of exposure to smoke from fires


Smoke from any types of fire (forest, brush, crop, structure, waste or wood burning) contains a mixture of various sized particles, water vapor and gases - including carbon monoxide, nitrogen oxides and volatile organic compounds. Smoke particles in the air can irritate your eyes, nose and throat. Smaller particles can also penetrate deep into the lungs, which can be very harmful. Inhalation of gases such as carbon monoxide decreases the body's oxygen supply, which can result in headaches, reduced alertness, fatigue and can worsen pre-existing medical conditions such as angina. People with heart disease or lung disease, older adults, children and pregnant women are at greater risk of health effects from smoke inhalation.

Inhaling smoke for a short time can cause immediate (acute) effects. These include:

- itchy/ burning eyes
- runny nose
- shortness of breath
- headaches
- irritated sinuses
- throat irritation
- cough

For most people, these symptoms are short term and will resolve when they move away from the fire into clean fresher air. People with known lung or heart diseases such as asthma, emphysema, angina and ischemic heart disease are at greater risk as exposure to smoke could exacerbate their underlying conditions. The gases and fine particles produced can make existing lung diseases worse causing difficulty in breathing, wheezing, coughing and chest tightness.

People with underlying heart diseases may experience chest pain, palpitations, difficulty breathing and fatigue. Other health hazards from fires include extreme heat, physical injuries such as burns, heat stress and dehydration.

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 [www.injury.net.com.au](http://www.injury.net.com.au)

References:

1. Environment Protection Authority Victoria - Smoke and your health
2. NSW Government Health - Illness and Injury for bushfire
3. NSW Government Health - Protect yourself from bushfire smoke
4. CDC Wildfire smoke
5. SafeWork Australia : Working Outside

## Preventative Measures

1. Where possible, limit your exposure by:
  - a) Checking the Air Quality Index (AQI) for your region then check what the AQI means and what activities you can and cannot do.
  - b) Avoiding vigorous outdoor activities.
  - c) Using appropriate respiratory protection to reduce exposure to particles and gases in smoke. Surgical and cloth masks do not protect against smoke. P2/N95 rated face masks are recommended as it can filter out the fine particles in smoke. It is important that the face mask is used in accordance with the manufacturer's instructions and a fit check is conducted.
  - d) Air purifiers with high efficiency particle air (HEPA) filters are also useful to reduce the number of fine particles indoors.
2. Ensure that you always keep yourself well hydrated.
3. If you have an existing lung or heart disease (i.e asthma or angina) you should ensure that you have a current management plan in place and enough supply of your medications. It is important to seek early medical attention should you start to experience any symptoms.

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