

## Unflued Gas Heaters and Your Health

Heating your home can provide warmth and comfort during winter, especially for people living in colder climates.

However, unflued gas heaters release emissions directly into the room which can potentially harm your health.

This pamphlet provides information to householders and operators of schools and aged care facilities on the health risks of unflued gas heaters and ways to avoid or reduce the health risk.

### What is an unflued gas heater?

An unflued gas heater burns gas to produce heat and has no flue or chimney to take combustion products outside. Some are portable and have a flexible hose to plug them into a gas outlet through a wall or floor socket or may be LPG heaters. Others may be fixed to the wall.

### What air pollutants are produced?

Unflued gas heaters produce a number of pollutants as a result of combustion. Pollutants which can harm your health include nitrogen dioxide and carbon monoxide.

Water vapour is also produced and can indirectly affect health by increasing the growth of moulds and dust mites.

The amount of air pollutants produced by an unflued gas heater can vary depending on:

- The type of heater
- Correct installation
- Correct use of the heater
- How often it is serviced

In addition, the level of air pollutants in the room will vary depending on:

- The way in which the heater is used
- The size of the room being heated
- The effectiveness of ventilation in removing pollutants from the room

### Potential health effects of air pollutants

Recent research has found that unflued gas heaters increase the level of indoor air pollutants and also the incidence of respiratory symptoms amongst some building occupants.

Health effects from nitrogen dioxide and carbon monoxide may occur immediately at the time of exposure or they may occur sometime later.

Some people are more susceptible than others and may be more likely to suffer health effects.

Given the high rate of childhood asthma in both Australia and New Zealand, the use of this type of heater should be minimised.

**Nitrogen dioxide** is usually difficult to detect in the home. People with asthma are particularly susceptible to the effects of nitrogen dioxide and may experience asthma attacks more often.

In addition, children may experience increased coughing, wheezing and shortness of breath and may get respiratory infections more often.

**Carbon monoxide** is invisible and has no smell or taste, so is difficult to detect. It deprives the body of oxygen, leading to impaired thinking and reduced alertness.

If the level of carbon monoxide in a room goes above the 'safe levels', people with heart disease may get chest pain or angina. Smokers with heart disease are particularly at risk. Young children, unborn babies and the elderly may also be affected.

Exposure to very high levels of carbon monoxide can cause carbon monoxide poisoning. This may affect anyone. Symptoms of carbon monoxide poisoning include tiredness, shortness of breath, headaches, dizziness, nausea, weakness or confusion.

Exposure to extremely high levels of carbon monoxide can result in death. However, extremely high levels are unlikely to occur when unflued gas appliances are operated in accordance with manufacturer's instructions and maintained regularly.

### **What to do if you have an unflued gas heater**

There are several things you can do to avoid or reduce your exposure to pollutants from unflued gas heaters.

- The room needs to be well ventilated. Keep internal doors and at least one window open to allow fresh air to enter the room. Check that room vents are not blocked.
- Never use an unflued gas heater in the room where you sleep or in a caravan.
- Minimise the length of time that an unflued gas heater is used.
- Ensure the heater has electronic ignition. Also check that the heater has a safety system that shuts the heater off when there is not enough fresh air.
- Only allow installation of the gas supply by a qualified tradesperson.
- Read and follow instructions for the use of the appliance.
- Have your unflued gas heater serviced at least once a year. Heaters that are not in good

working order can release higher amounts of pollutants into your home.

### **Alternative heating options**

If you are considering purchasing a heater for your home, consider one that does not produce indoor air pollution, such as:

- Flued gas heating or central heating, which carries the pollutants outside.
- An electric heater or reverse cycle air conditioner.

#### **Be very careful about using an unflued gas heater, especially if**

- anyone has **heart disease** or **asthma**.
- anyone is **pregnant** or **elderly**.
- you have **children**.

For further information on unflued gas heaters and indoor air pollution, contact your local government or the Environmental Health Directorate of the Department of Health. This brochure is also available on the Internet from:

<http://www.health.wa.gov.au/publications/>

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