

# Auckland Regional Public Health Service

Rātonga Hauora ā Iwi o Tamaki Makaurau



Working with the people of Auckland, Counties Manukau and Waitemata

## Public Health Factsheet – Unflued Gas Heaters

Heating provides warmth and comfort during winter, especially for people living in colder climates. However, unflued gas heaters can harm your health by releasing polluting gases directly into the room - and into the air you breathe.

### What is an unflued gas heater?

A gas heater burns gas to produce heat. An unflued gas heater is a gas heater that has no flue or chimney to remove the products of gas combustion outdoors, so all the waste products discharge straight into the room. Some are portable, and are plugged into a gas outlet through a wall or floor socket, while others are fixed to the wall. Liquid propane gas (LPG) cabinet heaters are commonly used in New Zealand.

Patio heaters are another type of unflued gas heater. This type of heater should never be used indoors.

### What pollutants do unflued gas heaters produce?

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

Unflued gas heaters also produce water vapour that can indirectly affect health by increasing the growth of moulds and dust mites.

The amount of air pollutants an unflued gas heater will produce will vary depending on:

- The type of heater.
- The way the heater is installed.
- How you use the heater.
- How often the heater is serviced.

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

- The size of the area you are heating. The smaller the room, the higher the concentration of pollutants.
- How effectively ventilation removes pollutants from the room. If a room is not well ventilated then the level of air pollutants will be higher than if the room is ventilated.

### What are the potential health effects of air pollutants?

Unflued gas heaters increase the level of indoor air pollutants, causing respiratory problems amongst susceptible people. Health effects from nitrogen dioxide and carbon monoxide may occur immediately at the time of exposure, or they may occur sometime later. There is a high rate of childhood asthma in Australia and New Zealand, and so care needs to be taken in the choice of heater, particularly when children or the elderly are involved.

**Nitrogen dioxide** is odourless and invisible at levels that harm your health. People with asthma are particularly susceptible to the effects of nitrogen dioxide, and may experience symptoms more often when exposed to an unflued gas heater.

**Carbon Monoxide** is also odourless and invisible. It deprives the body of oxygen, leading to impaired thinking and reduced alertness.

If the level of carbon monoxide in a room continues to rise, 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 can affect anyone. Symptoms of carbon monoxide poisoning include tiredness, shortness of breath, headaches, dizziness, nausea, weakness and/or confusion. Exposure to extremely high levels of carbon monoxide can kill.

### **What should I do if I have an unflued gas heater?**

There are several things you can do to 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, in a bathroom, caravan or tent.
- Minimise the length of time you use an unflued gas heater.
- Make sure your heater is installed by a licensed gas fitter.
- Read and follow the manufacturer's instructions for using your heater.
- Have your unflued gas heater serviced by a qualified person at least once a year. Heaters that are not in good working order can release higher amounts of pollutants into the air. Do not do any maintenance on an unflued gas heater yourself.

### **What alternative heating options do not produce indoor air pollution?**

If you are considering buying a heater; consider one that does not produce indoor air pollution, such as:

- Flued or central heating - that carries pollutants outside.
- Convection heaters i.e. oil-filled column heaters, night-storage heaters, panel heaters.
- Directional heaters i.e. portable fan heaters, radiant heaters.
- Heat pumps.

### **Further information**

Please contact Auckland Regional Public Health Services on (09) 623 4600 and ask for the duty Health Protection Officer in the Healthy Environments team if you require further advice or have concerns about heating in your home.