# Keeping you and your family safe

## Safety tips for using gas in your home

ELGAS


# How to detect a gas leak in your home

## Using your nose

For safety reasons, gas suppliers add an odourant to the gas – Ethyl Mercaptan or a similar chemical – which helps to detect a gas leak in your home. Natural gas and LPG are naturally colourless and odourless without this additive.

## Using your ears

Leaking gas from a small opening may cause a hissing noise. Once you determine the general area, you can utilise the soapy water leak test to identify the exact location of the leak. Be sure to check all connections with the soapy water, as well.

## Electronic detectors

You can purchase electronic combustible gas detectors online or in your local hardware store. They can be stationary or handheld portables.

They detect both Natural Gas and LPG in low concentrations, before they form a flammable mix with air. It has an audio alarm, similar to a smoke detector. Carbon Monoxide detectors are also available.

## Higher gas bills

If you notice that your gas bill shows higher consumption in gas units than the same period in the previous year, you may have a leak. Sometimes the leaks are so slow that you can neither smell nor hear them, but they may show up on your gas bill.

Remember to use gas units like cubic meters, cubic feet, kilograms, litres, or gallons to look for a change, and not the monetary value, as prices may have changed.

## Using your eyes

If you ever observe a white mist or cloud, it could be indicative of a pipe rupture or similar leak. You should evacuate the area immediately and call for help from a safe location.

## Flame colour

If you observe a red or yellow flame, there is something wrong with your appliance or you may have a leak. Your burners might need cleaning, and you should have your gas appliance serviced at least every two years, or more often if recommended by the manufacturer.

Red and yellow flames are also indicative of the production of Carbon Monoxide, which is a poisonous gas. So, call a gas fitter for a service call as soon as possible.

## Scorching or soot

If you see scorching or soot in an unusual location on the appliance, it may indicate a leak when the appliance is turned on.

For example, a burner connection that is leaking may create a flame in an unintended place, and that flame may leave a sooty stain.

## Pilot lights that go out

Whilst pilot lights are much rarer in modern gas appliances, they still exist. Leaks are one cause for a pilot light to keep going out.

If you have that problem, it is time for a service call.

## Dead or dying plants or trees

Plants and trees are very sensitive to atmospheric changes, so if an underground gas leak occurs for any reason, plants or trees nearby may start dying. If there is no other obvious reason for the plant problem and they are near or on top of a buried gas line, it is worth getting it checked with a gas detector. Leaking gas may even affect indoor plants.

# Never use a gas stove or oven as a heater

Gas stoves and ovens are for cooking only. They are not designed or intended for use as space heaters, or to be used with the door open. Improper use can be dangerous or even fatal. This includes homes, boats, caravans and other recreational vehicles.

All gas appliances must be either flued or have continuous ventilation to ensure the safe use of the appliance. Flued gas heaters have a flue pipe that directs combustion gases out of your home.

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## Problematic gases

The gases of primary concern are CO (Carbon Monoxide) and $NO_X$ (Nitric Oxide and Nitrogen Dioxide).

These gases can be produced during combustion and especially if there is incomplete combustion. Australia has some of the world's most stringent standards on indoor gas heater emissions.

## Indoor gas heater safety

Indoor gas heaters include flued gas heaters or portable (unflued) gas heaters. Flued heater designs have zero indoor emissions, as all the combustion gases go up the flue.

Unflued (portable) gas heaters do emit some combustion gases into your home. Government safety regulations specify the maximum levels. For Australian certification, unflued indoor gas heaters must meet or surpass these strict standards.

The same is not true for gas stoves, ovens or outdoor gas (patio) heaters, because they are **not** designed to be used as heaters!

# Don’t use outdoor gas heaters indoors

### What is an outdoor heater?

The most common kind of outdoor heater is a patio heater. These are typically either the tall mushroom style or the shorter round area heaters.

There are also garage, warehouse and industrial blow heaters. These are intended for very large spaces and should never be used in a home or other smaller enclosure.

## JUST DON’T DO IT

**That is the simple message for people who are thinking about using an outdoor gas heater indoors.**

- ✓ Indoor gas heaters are extremely safe when used indoors
- ✓ Outdoor heaters are very safe when used outdoors

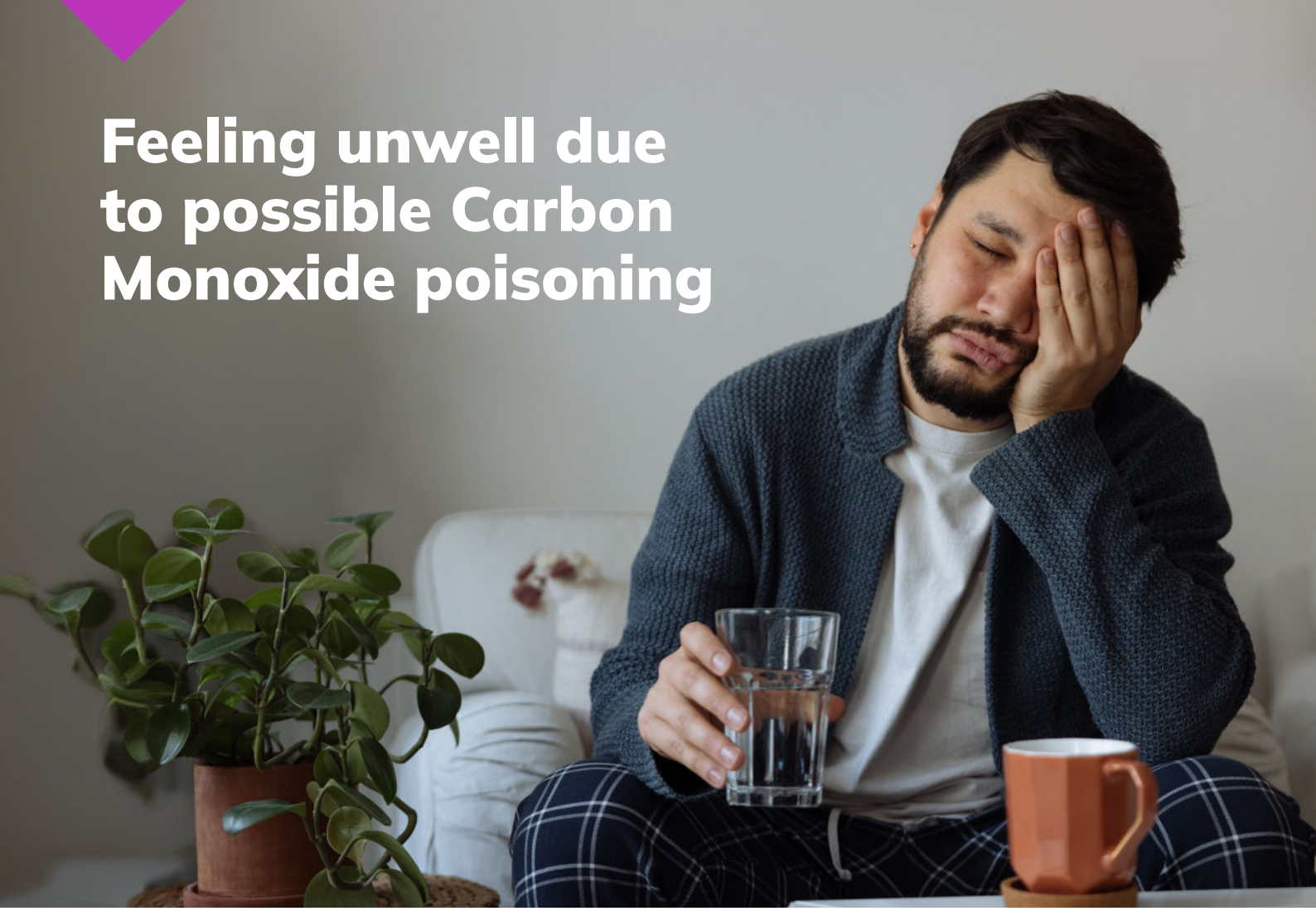
However, using an outdoor propane/LPG gas heater indoors is a really bad idea that is both dangerous and potentially fatal.

### Only use heaters designed for indoor use inside your home

You can use a propane/LPG heater inside only if the heater was designed for indoor use. Indoor propane/LPG gas heaters can be used inside because they are designed to minimise or virtually eliminate the production of Carbon Monoxide. Some indoor gas heaters pipe combustion gases outdoors, using a flue.

Using an outdoor propane/LPG gas heater inside can produce poisonous Carbon Monoxide, CO, as part of their combustion gases.

# Feeling unwell due to possible Carbon Monoxide poisoning



**Carbon Monoxide, CO, is a toxic gas, and is lethal even in low conentrations. Carbon Monoxide is colourless, odourless and tasteless. CO is less dense than air, so it rises.**

All gas appliances, domestic and industrial, produce water vapour, Carbon Dioxide and heat, and usually very, very small amounts of Carbon Monoxide.

If installed and maintained correctly, the operation of the gas appliance provides quick and efficient heating, cooking, hot water and more, and the products of combustion do not create any hazardous situations.

If an appliance is not correctly installed and maintained or has been modified, the products of combustion might change, and become hazardous to the people around the appliance.

Something as simple as a ventilation change (getting fresh air to the appliance to sustain complete combustion) may cause a gas appliance to malfunction, and create a hazardous situation for the people around. Sometimes it is obvious when a gas appliance malfunctions.

Nausea, headaches, difficulty or irregular breathing, fatigue, chest pain, flu like symptoms, dizziness or light-headedness, and drowsiness can all be signs of Carbon Monoxide (CO) poisoning.

Immediately stop using any gas appliance if you experience any of the above symptoms. Move to an area where you can breathe fresh air and seek medical attention.

# Scalding hazard prevention for hot water systems

**Scalding is one of the most serious, painful and long-term injuries for young children. It can happen very quickly, depending on the temperature of the water.**

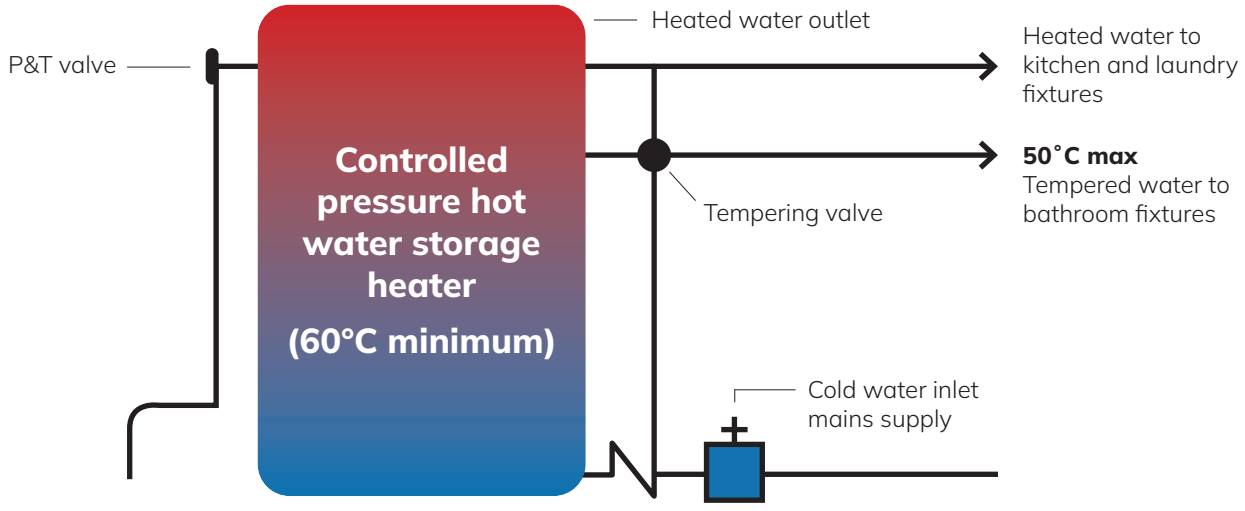
However, with the hot tap water at a maximum temperature of 50°C a serious burn wouldn't typically happen until after five minutes. This is the benefit of a hot water mixing valve in controlling the hot water tap temperature.

## How a hot water mixing valve works

A hot water mixing valve maintains a high tank temperature whilst simultaneously providing more tepid water for taps, with the temperatures specified by tempering valve regulations.

This keeps the tank hot enough to stop bacterial growth (>60°C) and still provide a lower hot water from tap temperature (~50°C) to help reduce the risk of accidental scalding.

A hot water mixing valve works by mixing in cold water with your hot water, before it reaches your taps.



# Emergency instructions

**Emergency response number:**

**1800 819 783**

or check for a number listed on your cylinder.

**Contact ELGAS 24 hours a day:**

**131 161**

## If there is a gas leak

If you suspect a gas leak, call the emergency response number from a safe location.

If it is safe to do so, turn off the cylinder valve(s) by rotating the valve handles clockwise. This should reduce the danger until help arrives.

As an added precaution, make sure the area is well ventilated to disperse any gas, and remove or turn off all flames and other sources of ignition such as pilot lights in hot water systems or ducted heating units.

Do not use light switches or any other electrical switches.

## If there is a fire

Fire at or near the cylinders should be immediately reported to the fire authorities, and to ELGAS. However, remember that gas tank and cylinder installations regularly survive even the extremes of bushfires.

In case of approaching fire, turn off the cylinder valve(s), only if safe to do so. Leave the cylinders upright and secured. They will discharge gas if they get very hot, a safety feature to keep the pressure in the cylinder down.

The situation can be readily handled by trained people, so please vacate the premises and leave the situation to the experts.

**Contact ELGAS to speak with an LPG gas expert to order your gas or get more information on any of the topics in this book.**

**Local. Safe. Reliable.**

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