Carbon monoxide

What you should know

Take note

If you're shopping for a carbon monoxide alarm, look for one approved by the Canadian Standards Association. CSA standard number 6.19-01 and the blue flame logo should be printed on the package.

Common causes of CO in homes include faulty fuel-burning appliances, vehicle exhaust inside a garage or enclosed area, tobacco smoke and fires.

Carbon monoxide (CO) is a colourless, odourless toxic gas. When inhaled, CO interferes with the blood's ability to absorb and transport oxygen. Exposure to high amounts of CO can cause unconsciousness, brain damage and death; however, the risk of CO poisoning from well-maintained natural gas appliances is extremely low. You can protect yourself by having your appliances serviced regularly and being alert to signs of CO in your home.

How is CO produced?

Carbon monoxide is produced whenever fuels such as gas, oil, propane and even wood, burn incompletely. For fuel-burning appliances to work safely, they need:

- enough air for complete combustion, and
- proper venting of the combustion products

Under normal operation, natural gas burns cleanly, producing heat, carbon dioxide and water vapour. But if enough air is not available, the burner isn't working properly, or the vent or chimney is blocked, CO can accumulate in your home.

Protect yourself against CO

Caulking and weatherproofing your home saves energy and money, keeping cold air out and heated air in. But if your home is too airtight, indoor air quality can decrease.

Appliances and heating systems must be properly vented to the outside, including fireplaces, furnaces, natural gas hot water heaters, kitchen exhaust fans, and attic vent fans. If the vent is blocked or the appliance is poorly adjusted, combustion byproducts can't escape, causing CO levels to build up inside the home.

If you're planning renovations or energy improvements, adding high-volume exhaust fans or planning to enclose your furnace or water heater, contact a licensed gas contractor to find out if you'll need extra air supply.

Maintain your natural gas appliances

- Have a licensed gas contractor install, inspect and service your natural gas appliances and check vents regularly to make sure they are not disconnected, blocked or corroded.
- Ask if contractor personnel are licensed gasfitters and know how to check heat exchangers—companies solely in the furnace installation or cleaning business may not necessarily be qualified to do this.
- Read and keep your manufacturer's operating and maintenance manuals.

Ensure adequate fresh air and ventilation

- Check that outside air ducts, exhaust vents and bug screens are clear and allow a free flow of air.
- Always keep furnace fan compartment doors and/or the filter access panel in place.
- Seal all joints in any cold-air return ducts in the furnace room.

Use cooking and heating equipment safely

- When using an open wood-burning fireplace, open the damper and partially open a window or door at or below the level of the fireplace. Close the damper after each use, but only after the ashes are cool.
- Use a properly sized exhaust fan vented to the outside when using gas cooking appliances.
- Never use a barbecue or propane heater inside the house or garage, even during a power or gas outage.
- Never start a vehicle in a closed garage. When pulling out into the driveway, close the garage door immediately to prevent exhaust fumes from being drawn into the house.

Signs of CO in your home

The risk of CO poisoning is extremely low from well-maintained natural gas appliances. Most incidents of elevated CO levels in the home are caused by fires and car exhaust.

Common signs of the presence of CO in your home are:

- you or other members of your household suffering from flu-like symptoms such as headaches, nausea, dizziness, drowsiness, confusion, weakness, stumbling and fainting
- an unidentified chronic odour inside the building
- excessive moisture on windows and walls

Young children, the elderly, people with heart disease and people under the influence of medication, drugs or alcohol may be particularly susceptible to CO poisoning.

Should I buy a carbon monoxide alarm?

Carbon monoxide alarms offer extra protection and peace of mind, but they are NOT a substitute for regular appliance maintenance and inspection, nor are they a substitute for a smoke alarm.

Install CO alarms near sleeping areas on each floor of the home. Place them high on the walls and at least 15 feet away from the furnace, bathrooms and cooking appliances.

What to look for in a CO alarm

- Look for one that has been tested and certified to meet Canadian safety standards. Products with "CSA 6.19-01" and the CSA blue flame mark printed on the packaging, as well as a replacement date, have met the Residential Carbon Monoxide Alarming Devices Standard. The CSA standard also indicates that the manufacturer has tested its CO alarms for in-service reliability.
- An alarm with a digital display will continually show the current level of CO as well as the time since the last peak level was reached.
- A CSA-certified CO alarm must sound an 85 decibel alarm (similar to a smoke detector) when it detects a certain level of CO in the air for a certain length of time. The higher the concentration of CO, the sooner the monitor must alarm.
- A battery-operated unit or plug-in model with a battery backup can protect you when the power fails. Replace the batteries annually.
- A CO alarm should also have a test button to allow you to check that the alarm is working properly. Test your CO monitor at the same time you check your fire alarm, at least twice a year, for example, on the dates you reset clocks for the time change.

More information

For more information on natural gas safety, visit **terasengas.com**, or call us at **1-888-224-2710**.

If you think there's carbon monoxide in your home:

- open doors and windows to air out the room or building
- turn off the suspect appliance
- get everyone to fresh air immediately
- seek medical advice immediately for physical symptoms
- have a licensed gas contractor inspect your appliances

CO Infosheet 03/10 09-170

Terasen Gas