

# CARBON MONOXIDE SAFETY



Understanding the  
'silent killer'

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## What is carbon monoxide?

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Carbon monoxide (commonly known as CO) is a colourless, odourless toxic gas. When inhaled, CO interferes with the blood's ability to absorb and transport oxygen.

Carbon monoxide is produced when fuels are burned incompletely. Tobacco smoking, idling gasoline-powered vehicles, and the burning of oil, coal, wood, charcoal, kerosene, propane or natural gas can all produce carbon monoxide.

The risk of carbon monoxide poisoning from regularly maintained appliances that are properly ventilated is extremely low.

But improperly installed, operated or poorly maintained appliances that use these fuels may create unsafe levels of CO. In enclosed spaces like your home, vehicle, cottage, boat, recreational vehicle or tent, even a small amount of CO is dangerous.

## WHAT ARE THE SYMPTOMS OF CARBON MONOXIDE POISONING?

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Exposure to carbon monoxide causes flu-like symptoms such as headaches, nausea, dizziness, drowsiness, confusion, impaired judgement, loss of manual dexterity, and even loss of consciousness. In severe cases, CO poisoning can cause brain damage and death. The elderly, children, people with heart and respiratory

conditions, and pets may be particularly sensitive to CO and may feel the effects sooner.

## **WHAT DO I DO IF CO POISONING IS SUSPECTED?**

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- Leave the building immediately
- Call 911 or your local fire department
- Seek medical help

## **HOW DO HEATING APPLIANCES WORK?**

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The safe operation of any fuel-burning appliance requires:

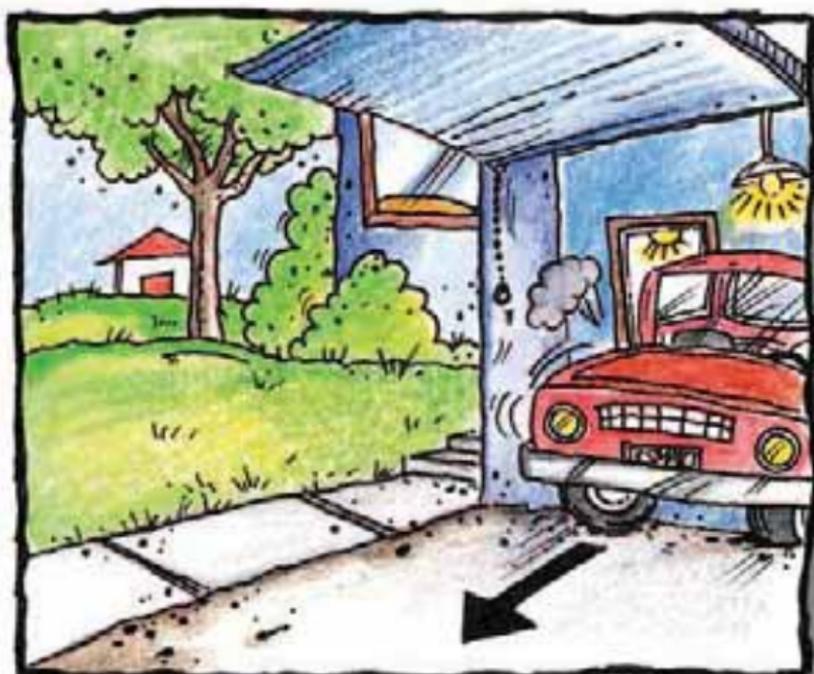
- An adequate supply of air for combustion
- Effective venting of the products of combustion to the outdoors

During the normal operation of a heating appliance, fuel mixes with air to produce carbon dioxide (CO<sub>2</sub>), water vapour and useful heat. Small amounts of carbon monoxide may also be formed. If there is not enough air available, or if the burner is not operating properly, incomplete combustion will result in excessive production of carbon monoxide. The vent or chimney usually removes all of the products of combustion from the building; but if the vent is not effective, products of combustion can spill into the home.

## **WHAT SHOULD I DO TO PREVENT A CARBON MONOXIDE HAZARD?**

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- Immediately move your car out of the garage after starting it. This prevents exhaust fumes seeping into the building through connecting doors or vents.
- Familiarize yourself with the operating and maintenance manuals provided with your fuel burning appliances.
- Have your fuel burning appliances checked regularly by a qualified service technician or heating contractor. Gas appliances should be checked by a licensed gas fitter. Some appliance manufacturers recommend annual inspection and maintenance.



### **Move car outside once started**

- Check that chimneys and vents are not corroded or blocked (by a bird's nest, snow or ice or other debris).
- Keep combustion air inlet ducts clear. They can become blocked by accumulated snow and ice or other debris.
- Operate your kitchen exhaust fan when using your gas stove. Combustion products and water vapour produced when cooking are then ventilated outside.
- If you are adding a new fuel burning appliance or making changes to your home's ventilation system



### **Have regular inspections**

including adding new windows and additional insulation, consult a qualified heating contractor. Changes may upset the operation of existing appliances.



**Blocked furnace vent**

Use appliances only for the purpose for which they are intended. Portable propane camping equipment and gas barbecues are approved for outdoor use only. They should never be used inside cabins, recreational vehicles, boats or tents. Read the

labels on recreational appliances and follow the manufacturer's operating instructions.

- Never use a gas cooking range for space heating purposes.
- Do not operate chainsaws, lawn mowers, snow-blowers in a closed area (garage, workshop, etc.)
- Open a window when using a wood fireplace or operating large kitchen/bathroom fans in a tightly-sealed house.
- Inform your family members about the symptoms and causes of CO poisoning. Work together to minimize the production of CO in your home.



**Don't barbecue indoors!**

# DANGER SIGNS

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- You or members of your family have symptoms of carbon monoxide exposure
- Abnormal odour when your furnace or other fuel-burning appliances turn on
- The air feels stale or stuffy
- Abnormal moisture forming on windows and walls

## HOW TO PURCHASE A CARBON MONOXIDE ALARM

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When you buy a CO alarm, make sure that it is certified to Canadian standards. Products with CSA 6.19-01 on the packaging have been tested to the Residential Carbon Monoxide Alarming Devices standard published in March 2001. The package will also show a replacement date. The new standard includes Times-of-Manufacture and In-Service reliability testing.

Follow the manufacturer's instructions for installation, proper use and maintenance. CO alarms are usually installed adjacent to sleeping areas. More than one may be required if sleeping areas are located on different levels of your home.

While carbon monoxide alarms may provide an extra measure of warning, they should never be relied upon as a substitute for regular inspection and maintenance of natural gas, propane, kerosene, oil or wood burning appliances, venting and chimneys. A CO alarm should not be used as a substitute for a smoke alarm.

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Fire Commissioner,  
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