

Keeping Safe from the “Silent Killer”

The following information is provided by the Technical Standards and Safety Authority (TSSA). For more information about carbon monoxide safety, visit their website at www.tssa.org, or contact your fire department.

What is Carbon Monoxide?

Carbon monoxide (CO) is a colourless, odourless, tasteless and toxic gas and is often referred to as the “silent killer”. When inhaled it inhibits the blood’s capacity to transport oxygen throughout the body. It can poison the body quickly in high concentrations, or slowly over long periods of time.

What are the symptoms of carbon monoxide poisoning?

Exposure to CO can cause flu-like symptoms such as headaches, nausea, dizziness, burning eyes, confusion, drowsiness or loss of consciousness. In severe cases, CO poisoning can cause brain damage and death. The elderly, children and people with heart or respiratory conditions may be particularly sensitive to CO.

How is carbon monoxide generated in the home?

Carbon monoxide is a by-product of incomplete combustion of fuels such as natural gas, propane, heating oil, kerosene, coal, charcoal, gasoline or wood. This incomplete combustion can occur in any device that depends on burning for energy or heat, such as furnaces, room heaters, fireplaces, hot water heaters, stoves or grills and any gas-powered vehicle or engine. Automobiles left running in attached garages, gas barbecues operated inside the house, grills or kerosene heaters that are not properly vented, or chimneys or vents that are dirty or plugged may create unsafe levels of CO.

When properly **installed, maintained and vented**, any CO produced by these devices will not stay inside the home.

What are some danger signs?

- You or other members of your family have symptoms of CO exposure (see above).

- You notice a sharp, penetrating odour or smell of gas when your furnace or other fuel-burning equipment turns on.
- The air is stale or stuffy.
- The pilot light of your furnace or other fuel-burning equipment goes out.
- Chalky white powder forms on the chimney/exhaust vent pipe or soot build-up occurs around the exhaust vent.

How can unsafe levels of carbon monoxide be detected?

Carbon monoxide alarms monitor airborne concentration levels (parts per million) of carbon monoxide and sound an audible alarm when harmful CO levels are present.

Be sure that your alarm has been certified to the Canadian Standards Association CAN/CGA 6.19 standard or the Underwriters Laboratories (UL) 2034 standard.

If you suspect carbon monoxide in your home...

If you or anyone in your home is experiencing the symptoms of CO poisoning, ensure that everyone leaves the home immediately, leaving the door open. Call your local fire department or 911 from a neighbour’s telephone. If your CO alarm sounds, do NOT assume it to be a false alarm. Open all doors and windows to ventilate the home. If you cannot find the problem and the alarm continues, contact the fire department. If there is a strong smell of natural gas in your home, evacuate immediately, leaving the door open, and contact your local gas utility.

If no symptoms are experienced, reset the alarm and check to see if it activates. If the alarm sounds a second time, call the local fire department for their assistance.

If the alarm does not sound a second time, check for common conditions that may have caused a CO build-up (see the accompanying illustration) or contact a qualified heating contractor to check your fuel-burning equipment.

Where should a CO alarm be located in the home?

Proper placement of a CO alarm is important. In general, the human body is most vulnerable to the effects of CO during sleeping hours, so an alarm should be located in or as near as possible to the sleeping area of the home.

If only one alarm is being installed, it should be located near the sleeping area, where it can wake you if you are asleep.

Where sleeping areas are located in separate parts of the home, an alarm should be provided for each area.

Additional CO alarms should be placed on each level of a residence and in other rooms where combustion devices are located (such as in a room that contains a solid fuel-fired appliance, gas clothes dryer or natural gas furnace), or adjacent to potential sources of CO (such as in a teenager’s room or granny suite located adjacent to an attached garage).

Unlike smoke, which rises to the ceiling, CO mixes with air. Recognizing this, a CO alarm should be located at knee-height (which is about the same as prone sleeping height). Due to the possibility of

tampering or damage by pets, children, vacuum cleaners and the like, it may be located up to chest height. To work properly, a CO alarm should not be blocked by furniture, draperies or other obstructions to normal air flow.

If a combination smoke/carbon monoxide alarm is used, it should be located on the ceiling, to ensure that it will detect smoke effectively.

Always refer to the manufacturer’s instructions for additional information regarding proper installation, use and maintenance.

To keep safe, please remember:

- You have a responsibility to know about the dangers of carbon monoxide. Your knowledge and actions may save lives.
- CO alarms are a good second line of defence, but do not eliminate the need for regular inspection, maintenance and safe use of fuel-burning equipment.
- Take the time to learn about the use of CO alarms in your home to ensure you are using this equipment properly and effectively.

