

# ***Catholic Mutual . . . "CARES"***

## **HOME SAFETY** ***CARBON MONOXIDE – A DEADLY GAS***

Carbon Monoxide (CO) is an invisible, odorless, colorless gas created when fossil fuels (such as gasoline, wood, coal, propane, oil, and methane) burn incompletely. CO mixes freely with the air we breathe. In the home, heating and cooking equipment are possible sources of CO. Vehicles or generators running in an attached garage could also produce dangerous levels of CO.

Carbon monoxide claims at least 250 lives each year from home fuel burning appliances. Another 5,000 people are treated each year in hospital emergency rooms for CO poisoning.

### **The Effects of Exposure to CO**

CO is poisonous when inhaled into the human body. CO replaces oxygen in the bloodstream, leading to suffocation. Mild effects feel like the flu, while severe effects include difficulty breathing and even death.

The following chart shows typical symptoms which vary from person to person depending on age, health, concentration and time of exposure.

Concentration (pts/million)	Symptoms
100	Threshold limit – No adverse effects for 6-8 hours exposure
200	Mild headache after 2-3 hours
400	Headache and nausea after 1-2 hrs.
800	Headache, nausea, and dizziness after 45 minutes; collapse and possible unconsciousness after 1 hr.
1,000	Loss of consciousness after 1 hr.
1,600	Headache, nausea, and dizziness after 20 minutes
3,200	Headache and dizziness after 5-10 minutes; unconsciousness after 30 minutes
6,400	Headache and dizziness after 1-2 minutes; unconsciousness and danger of death after 10-15 minutes
12,800	Immediate physiological affects; unconsciousness and danger of death after 1-3 minutes

## How Can You Prevent Carbon Monoxide?

**Your first line of defense is an annual inspection of your heating system.**

1. Do not use temporary heating systems. Never use a gas or propane range to heat your home.
2. Make sure your permanent heating system and appliances are operating and vented properly. Have the heating system and appliances inspected every year by a licensed heating contractor.
3. Keep flues and chimneys clean and free of debris.
4. Check for rusted or pitted flue pipes from your furnace and water heater. Do not patch or repair these pipes. They need to be replaced.
5. *Check the flames.* All gas flames should be crisp and blue. If flames are white or yellow, appear "soft" or wavy, or if you see soot or carbon deposits, shut off the furnace and call your heating contractor.
6. Hold your hand under the vent pipe on the furnace. If you notice hot air backing out of the vent, turn off the furnace and call your heating contractor. Hot air can mean blockage in the vent or chimney.
7. *Use a clean filter* – your furnace will run smoother and more efficiently. Standard air filters need to be changed once a month. Newer filters may be washable or require less frequent changing.
8. Be sure a fire is completely out before closing the fireplace damper.
9. Do not operate a barbecue grill in a closed area.
10. Do not start or run gasoline-powered equipment in a closed area.

## How To Protect Yourself From CO Poisoning

Install CO alarms inside your home to provide early warning of accumulating CO. The National Fire Protection Association (NFPA) recommends installing a CO alarm in households containing a fuel-burning appliance, fireplace, or in those having an attached garage. However, a CO alarm is no substitute for safe practices. The best defenses against CO poisoning are safe uses of vehicles (particularly in attached garages) and proper installation, use, venting and maintenance of household cooking and heating equipment.

## If you buy CO alarms:

- Select alarms listed by a qualified, independent testing laboratory (UL approved detector equipped with an audible alarm).
- Install CO alarms in a central location in homes, office areas, and buildings used to accommodate people. Each alarm should be installed on the wall, ceiling, or other location as specified by the manufacturer's instructions that accompany the unit.
- Call the local fire department and ask what number to call if the CO alarm sounds. Post that number by your telephone. Make sure everyone in the household knows the difference between the fire emergency and CO emergency numbers (if there is one).
- Test CO alarms at least once a month.
- Replace CO alarms according to the manufacturer's instructions, usually about every two to five years.
- Be aware that battery-powered CO alarms may have unique battery packs designed to last approximately two years, compared to batteries used in smoke alarms, which require yearly replacement.

## What To Do If Your CO Alarm Sounds

- Have everyone leave the building right away. Leave doors open as you go. Shut down heating and cooking equipment.
- Use a neighbor's telephone to report the CO alarm warning following the instructions you received from the fire department when you bought the alarm.
- Be on the lookout for any symptoms of CO poisoning.
- Call a qualified technician to inspect all equipment.
- Get immediate medical attention if anyone shows signs of CO poisoning.

CO alarms are not substitutes for smoke alarms. Smoke alarms react to fire by-products, before CO alarms would sound. Smoke alarms give earlier warning of a fire, providing more time to escape. Know the difference between the sound of the smoke alarms and the sound of the CO alarms. Have an escape plan for home and office emergencies and practice the plan with all members of the household/building regularly.