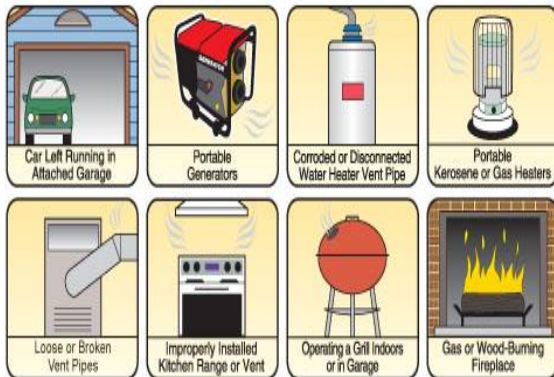


Safety Tips

Often called the silent killer, carbon monoxide is an invisible, odorless, colorless gas created when fuels (such as gasoline, wood, coal, natural gas, propane, oil, and methane) burn incompletely. In the home, heating and cooking equipment that burn fuel can be sources of carbon monoxide.



FACTS

A person can be poisoned by a small amount of CO over a longer period of time or by a large amount of CO over a shorter amount of time. In 2005, U.S. fire departments responded to an estimated 61,100 non fire CO incidents in which carbon monoxide was found, or an average of seven calls per hour.

- CO alarms should be installed in a central location outside each sleeping area and on every level of the home and in other locations where required by applicable laws, codes or standards. For the best protection, interconnect all CO alarms throughout the home. When one sounds, they all sound.
- Follow the manufacturer's instructions for placement and mounting height.
- Choose a CO alarm that has the label of a recognized testing laboratory.
- Call your local fire department's non-emergency number to find out what number to call if the CO alarm sounds.
- Test CO alarms at least once a month; replace them according to the manufacturer's instructions.
- If the audible trouble signal sounds, check for low batteries. If the battery is low, replace it. If it still sounds, call the fire department.
- If the CO alarm sounds, immediately move to a fresh air location outdoors or by an open window or door. Make sure everyone inside the home is accounted for. Call for help from a fresh air location and stay there until emergency personnel.
- If you need to warm a vehicle, remove it from the garage immediately after starting it. Do not run a vehicle or other fueled engine or motor indoors, even if garage doors are

- open. Make sure the exhaust pipe of a running vehicle is not covered with snow.
- During and after a snowstorm, make sure vents for the dryer, furnace, stove, and fireplace are clear of snow build-up.
- A generator should be used in a well-ventilated location outdoors away from windows, doors and vent openings.
- Gas or charcoal grills can produce CO — only use outside.

If The Alarm Sounds

TAKE APPROPRIATE ACTION:

- **OPEN THE WINDOWS AND DOORS TO VENTILATE**
- **ASSESS THE MEDICAL CONDITION OF THE OCCUPANTS**
- **IF NECESSARY, CALL THE FIRE DEPARTMENT**

In most cases because of the low alarm threshold required by UL 2034, there is no need to call the fire department if the residence is immediately ventilate and appropriate service personnel are called to investigate the source of the CO. By the time service personnel or fire department responders arrive, CO may no longer be present because the occupant took appropriate action by opening windows and doors. If any occupants are suffering symptoms of CO poisoning call 911 for emergency medical services.

SYMPTOMS OF CO POISONING

CO enters the body through breathing. CO poisoning can be confused with flu symptoms, food poisoning and other illnesses. Some symptoms include shortness of breath, nausea, dizziness, light headedness or headaches. High levels of CO can be fatal, causing death within minutes.

The concentration of CO, measured in parts per million (**ppm**) is a determining factor in the symptoms for an average, healthy adult.

- 50 ppm: No adverse effects with 8 hours of exposure.
- 200 ppm: Mild headache after 2-3 hours of exposure.
- 400 ppm: Headache and nausea after 1-2 hours of exposure.
- 800 ppm: Headache, nausea, and dizziness after 45 minutes; collapse and unconsciousness after 1 hour of exposure.
- 1,000 ppm: Loss of consciousness after 1 hour of exposure.
- 1,600 ppm: Headache, nausea, and dizziness after 20 minutes of exposure.
- 3,200 ppm: Headache, nausea, and dizziness after 5-10 minutes; collapse and unconsciousness after 30 minutes of exposure.
- 6,400 ppm: Headache and dizziness after 1-2 minutes; unconsciousness and danger of death after 10-15 minutes of exposure.
- 12,800 ppm: Immediate physiological effects, unconsciousness and danger of death after 1-3 minutes of exposure.

Source: NFPA's Fire Protection Handbook, 20th Edition.

DANGER

Carbon monoxide (CO) is an odorless, colorless gas that kills without warning. It claims the lives of hundreds of people every year and makes thousands more ill. Many household items including gas- and oil-burning furnaces, portable generators, and charcoal grills produce this poison gas. Following these important steps can keep your family safe.

CO Detectors

- Install battery-operated CO detectors near every sleeping area in your home.
- Check CO detectors regularly to be sure they are functioning properly.

Oil & Gas Furnaces

- Have your furnace inspected every year.

Portable Generators

- Never use a generator inside your home or garage, even if doors and windows are open.
- Only use generators outside, more than 20 feet away from your home, doors, and windows.

CHARLESTON FIRE DEPARTMENT FIRE PREVENTION BUREAU



*Working to
keep the City
Safe*

A Guide to Home Carbon Monoxide Safety

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