



# CARBON MONOXIDE

## Alarms in Every Home.

Appliance improvements and standards have made our daily living more convenient and safer. Even with more gas and oil-fired furnaces, water heaters, and stoves in service around the country the annual carbon monoxide (CO) poisonings from appliances are fewer each year; however, one number continues to climb. Consumers can be at risk when they improperly use gas generators, charcoal grills, and fuel-burning camping heaters and stoves inside their homes or in other enclosed or partially-enclosed spaces. CO poisoning can also occur when fuel burning appliances that have not been professionally inspected can produce excessive levels of and leak CO into the home. Automobiles, fireplaces, barbeque grills, portable gas-fired pressure washers, and generators generate CO as a byproduct of combustion and can contribute to CO poisoning.

Although the popularity of carbon monoxide (CO) alarms has been growing in recent years, it cannot be assumed that everyone is familiar with the hazards of carbon monoxide poisoning. 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. It is not heavier or lighter than air but mixes with the air in a room or building. Breathing CO at high enough concentrations can be fatal or cause permanent injury. Sources of CO in buildings include: fire, malfunctioning or improperly vented combustion appliances, improperly used or placed engine-driven tools, charcoal grills, camp stoves, and automobile exhaust.




While AHRI believes proper installation and maintenance of appliances is the most effective way to avoid incidents that involve gas and oil-fired appliances, the installation of CO alarms can alert occupants if the CO level in a home increases as a result of any source.

Several states and municipalities have introduced legislation that would require CO alarms in residences with fossil fuel-powered appliances; however, not in all-electric homes. These attempts to require protection for occupants fall short of real CO alarm protection from all possible sources. The death toll from carbon monoxide associated with generators and other portable equipment has been steadily rising in recent years. Detection and alarm protection is needed not just for fossil fuel powered appliances but also for fireplaces, automobile garages, and portable gas powered tools and equipment. Contractors, service providers, or a neighbor's portable,

**⚠ DANGER**

**Using a generator indoors CAN KILL YOU IN MINUTES.**

**Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.**

		
<b>NEVER use inside a home or garage, EVEN IF doors and windows are open.</b>		<b>Only use OUTSIDE and far away from windows, doors, and vents.</b>

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fuel-powered equipment operation can also put a home's occupants at risk. A gas-powered tool such as a pressure washer placed outside a window, doorway or vent can fill a home with CO in minutes.

Every year, there are documented CO poisoning events associated with power outages due to weather, where people find ways or use other methods to supply heat and light, or cook indoors. In the coldest months of winter, storms leave CO poisoning deaths in their wake. According to the Consumer Product Safety Commission

(CPSC), about 140 people die each year from unintentional exposure to carbon monoxide associated with consumer products. Many of these deaths occur after hurricanes, ice storms, and blizzards when portable generators and barbeque grills are used for light and heat during an electrical service outage.

In January 2007, CPSC required manufacturers to place a danger label on all new generators and the generators' packaging.


AHRI supports the installation and use of carbon monoxide (CO) alarms in all one- and multi-family dwelling units in the United States. The CO alarms should:

- Be listed to ANSI UL 2034, Standard for Single and Multiple Station CO Alarms or CSA 6.19, Residential Carbon Monoxide Detectors,
- Be installed according to NFPA 720, Standard for the Installation of Carbon Monoxide (CO) Warning Equipment in Dwelling Units, and
- Have a battery backup to operate during power outages.

Along with supporting the installation of CO alarms in all residences, AHRI encourages continued research and development to further improve durability and reliability of CO alarms.

The CPSC and the United States Fire Administration (USFA) urge consumers to take these important steps to protect themselves against CO poisoning:

- Never use portable generators inside homes or garages, even if doors and windows are open. Use generators outside only, far away from the home.
- Never bring a charcoal grill into the house for heating or cooking. Do not barbeque in the garage.
- Never use a gas range or oven for heating.
- Open the fireplace damper before lighting a fire and keep it open until the ashes are cool. An open damper may help prevent build-up of poisonous gases inside the home.
- Have home heating systems (including chimneys and vents) inspected and serviced annually by a trained service technician.
- Install battery-operated CO alarms or CO alarms with battery backup in your home outside separate sleeping areas.
- Know the symptoms of carbon monoxide poisoning: headache, dizziness, weakness, nausea, vomiting, sleepiness, and confusion. If you suspect CO poisoning, get outside to fresh air immediately, and then call 911.



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The National Fire Protection Association (NFPA) recommends:

- Installing CO alarms (listed by an independent testing laboratory) inside your home to provide early warning of accumulating CO. Carbon monoxide alarms should be installed in a central location outside each separate sleeping area. If bedrooms are spaced apart, each area will need a one.
- Calling your local fire department's non-emergency number to find out what number to call if the CO alarm sounds. Post that number by your telephone(s). Make sure everyone in the household knows the difference between the fire emergency and CO emergency numbers (if there is a difference).
- Testing CO alarms at least once a month and replace CO alarms according to the manufacturer's instructions.

- Knowing the difference between the sound of smoke alarms and CO alarms. CO alarms are not substitutes for smoke alarms.
- Having fuel-burning heating equipment (fireplaces, furnaces, water heaters, wood and coal stoves, space or portable heaters) and chimneys inspected by a professional every year before cold weather sets in.
- Selecting products tested and labeled by an independent testing laboratory when purchasing new heating and cooking equipment.
- Open the flue for adequate ventilation when using a fireplace.
- Never using your oven to heat your home.
- Having a qualified technician evaluate the integrity of the heating and cooking systems, as well as the sealed spaces between the garage and house, when buying an existing home.
- Removing a vehicle from the garage immediately after starting it if you want to warm it up. Do not run a vehicle, generator, 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.
- Only using barbecue grills—which can produce CO—outside. Never use them in the home, garage, or near building openings.



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