



Carbon Monoxide Safety

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What is carbon monoxide (CO)?

Carbon monoxide, otherwise known as CO, is an odorless, colorless, poisonous gas that is produced by gas powered devices such as dryers, stoves, ovens, generators, furnaces, water heaters and gas fireplaces. Wood burning fireplaces or stoves also create CO when not properly ventilated. Even when working properly, these fuel burning devices all produce small amounts of CO that are normally not hazardous to your health. However, appliance failures, improperly vented fireplaces or the use of fuel burning equipment indoors or in enclosed spaces can cause carbon monoxide to reach dangerous levels.

Why should I be concerned?

Today we are more aware of carbon monoxide and its dangers; however, CO related deaths in the United States are on the rise. This can be attributed to a variety of factors including: the increased energy efficiency of our homes which reduces the amount of fresh air flow; the increase in portable generator use; and an increase in the identification of CO related medical conditions. According to the Center for Disease Control (CDC), carbon monoxide related illness accounts for more than 20,000 emergency room visits and over 500 deaths each year.

What are the symptoms of carbon monoxide exposure?

Minor exposure to carbon monoxide can cause headaches, dizziness, weakness, nausea and vomiting. Severe exposure can cause confusion, loss of consciousness and even death. Having CO alarms installed in your home is only one step to preventing a carbon monoxide related emergency.

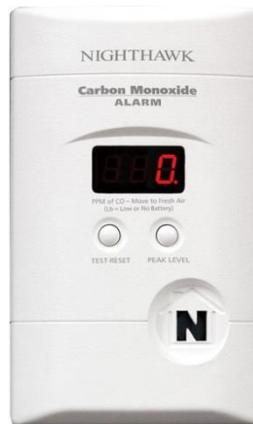
How do they work and where can I buy one?

You can purchase a carbon monoxide alarm at any local home improvement store. There are a variety of devices on the market today, but the basic operation utilizes sensors to detect elevated levels

of CO and alert you with an audible notification. We recommend installing carbon monoxide detectors with a digital display and battery backup. These devices utilize a variety of audible alarms to notify you of different issues including, high levels of CO, low batteries and even alarms to notify you that it is time to replace the unit. ALWAYS read the manufacturer's instructions explaining how to operate the device and what the different alarms mean. Make sure to only purchase alarms that are listed and certified by Underwriters Laboratory (UL).

Where should I install my CO alarms?

Alarms should be **installed outside of each sleeping area and on every level of the home.** CO alarms come in a variety of configurations. Some units are



CO Alarm with display

designed to be plugged into a power outlet with or without a battery backup, some operate only off battery power, and others may be combination smoke and carbon monoxide alarms. The plug-in units with a battery backup provide the security of knowing that your alarm will still function even during a power outage. New units are now available with

10 year lithium-ion batteries. Avoid placing CO alarms in locations that are near heating vents or areas that can be covered by furniture or drapes. It is not recommended to install CO alarms in the garage, kitchen or bathroom; and when installing them near fuel-burning appliances maintain at least 15-20 feet of clearance.

Do I have to test my CO alarm?

Yes. Along with your smoke alarms, you should **test your CO alarm monthly.** For specific testing instructions please follow the manufacturer's recommendations. Pressing the unit's test button



will only test the electronics and audible alarm, not the sensor. As with smoke alarms, CO alarms have a useful lifespan. On average, CO alarms should be replaced every 5 years. Please check with the manufacturer for device specific recommendations. UL requires that newer devices, produced after 2009, also produce an end-of-life signal to notify you that the device has reached the end of its useful life.

How can I prevent carbon monoxide poisoning?

While installing carbon monoxide alarms in your home will help to notify you of elevated levels of CO, good housekeeping practices can help prevent an incident from ever occurring. Please follow these general safety practices to prevent a CO incident:

- Install and operate all appliances according to the manufacturer's instructions and local building codes. Most appliances should only be installed or serviced by qualified professionals.
- Have your heating system inspected annually. Ask your inspector to check your fireplace and chimney for any blockages, damage or loose connections.
- Keep all vents clean and free of debris including those for appliances, furnaces and water heaters.
- Never leave a car running in your garage, even when the garage door is open.
- Never use gas appliances such as ranges, ovens, or clothes dryers to heat your home.
- Never operate gas powered equipment including generators or lawnmowers inside your garage or enclosed space.

What should I do when my CO alarm sounds?

- Never ignore your CO alarm.
- DO NOT attempt to locate the source of the carbon monoxide.
- Gather your family and go outside.
- Once everyone is out, **CALL 911**.

- The Northville Township Fire Department will arrive shortly after. We are equipped with portable gas monitors that allow us to measure the levels of carbon monoxide in your home.
- If CO is found, we will shut down all devices that may be causing the issue and notify the proper agencies.
- Once the hazard has been removed, we will advise you that is safe to go back inside.

Help us keep you and your family safe by creating good fire safety habits. Please visit us at www.northvillemich.com/fire, or visit these other sites www.usfa.gov, www.nfpa.org, www.cpsc.gov or www.cdc.gov for great safety tips. Please feel free to email any questions or comments to Northville Township Fire Inspector Tom Hughes at thughes@twp.northville.mi.us or contact via telephone at (248) 348-5807.



Generator Safety

With spring in the air and storm season upon us, portable generators will begin to see increased use. Improper use of portable generators is one of the leading causes of carbon monoxide related deaths. In 2008 alone, there were 93 generator-related CO deaths. Never use generators in homes, garages, basements or other enclosed spaces. Even when operating generators outdoors, never operate them near doors, windows or vents.

Carbon Monoxide Safety



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.

- » 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.

HOME HEATING EQUIPMENT



Have fuel-burning heating equipment and chimneys inspected by a professional every year before cold weather sets in. When using a fireplace, open the flue for adequate ventilation. Never use your oven to heat your home.

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.



Your Source for SAFETY Information

NFPA Public Education Division • 1 Batterymarch Park, Quincy, MA 02169

www.nfpa.org/education