



Fire Department, City of New York
FIRE SAFETY EDUCATION

Bill de Blasio, Mayor
 Daniel A. Nigro, Fire Commissioner

**SMOKE &
 CARBON MONOXIDE
 ALARMS**

**WILL YOUR SMOKE ALARM WAKE YOU AND YOUR FAMILY
 IN THE MIDDLE OF THE NIGHT?**



Most fire deaths occur in the middle of the night. A smoke alarm is the single most valuable lifesaving device you can have in your home.

An operable smoke alarm will reduce your chances of dying in a fire, nearly in half.

Smoke alarms are designed to detect and warn that silent, but deadly smoke is in the air. The early warning will wake you and your family, allowing time to implement your fire escape plan.

While 97 out of 100 homes have a smoke alarm, more than 33 percent of these homes are unprotected **because the smoke alarms don't work.**

When a smoke alarm fails to work, it is frequently because the batteries are missing. People often remove or disconnect batteries to prevent nuisance activation caused by bathroom steam or cooking vapors.

***Effective April 2014 all new and replacement smoke alarms in multiple dwellings and private homes must have a sealed 10 year battery that is non-removable and non-replaceable. It must also have an audible "end of life warning".**



How to Protect Yourself, Your Family and Your Neighbors

- Install smoke alarms that have the Underwriters Laboratories **(UL) Mark**. The **(UL) Mark** tells you that the alarm has been evaluated according to nationally recognized safety requirements. In New York City it should comply with **UL 217**.
- There are two kinds of smoke alarm sensors, **photoelectric and ionization**. **Ionization** technology is better at detecting flaming fires with very little smoke, while **photoelectric** technology is better at detecting smoldering fires with heavy smoke. In order to give your household the optimal protection, it is recommended you have both technologies in your home. This could be in the form of separate detectors or a combination alarm with both technologies.
- **One smoke alarm in the home is not enough.** Install a smoke alarm on every level, including the basement. Place a smoke alarm within 15 feet of all sleeping areas. New construction codes require an alarm in every sleeping area and they must be interconnected so if one is triggered they will all sound the alarm.
- Smoke alarms should be installed on the ceiling, preferably in the center of the room, but not less than 4 inches from a wall. If the smoke alarm is installed on a wall, it must be placed between 4 and 12 inches from the ceiling.

SMOKE ALARMS SAVE LIVES

CARBON MONOXIDE ALARMS SAVE LIVES

SMOKE ALARMS SAVE LIVES

A Public Fire Safety Message From The New York City Fire Department



YOUR SAFETY IS OUR MISSION

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- **Make sure everyone in your home can recognize and be awakened by the sound of the smoke alarm.**

Some children and the elderly may not readily awake to the sound of the smoke alarm. Consider installing interconnected smoke alarms so that when one alarm senses smoke and sounds, they are all triggered throughout your home. Installing an alarm in each bedroom increases each person's proximity to a sounding device. If someone in your home has a hearing loss, consider complementing your smoke alarm with a 520Hz beside fire alarm and bed shaker device and a high density (visual) strobe light.

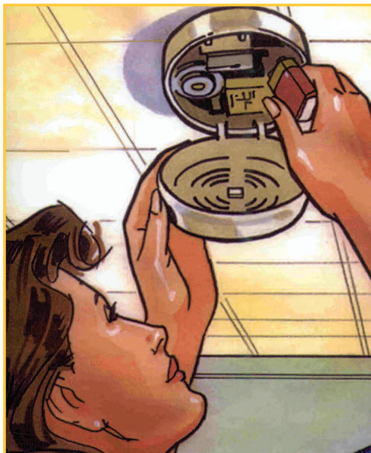
Nuisance Alarms

Smoke alarms frequently are set off by bathroom steam or cooking vapors. **Rather than take the battery out of your alarm, do the following:**

- Quiet the alarm by pushing the "HUSH" button, if equipped.
- Open windows and turn on vent fans to clear the air.
- Consider relocating the alarm farther away from the cooking area or bathroom.
- Consider installing a photoelectric alarm. The photoelectric type alarms are less sensitive to cooking smoke.

KEEP YOUR SMOKE ALARM WORKING!

IT IS UP TO YOU TO MAKE SURE YOUR SMOKE ALARM WILL PROVIDE A LIFESAVING EARLY WARNING IN THE EVENT OF A FIRE.



CO THE SILENT

Carbon monoxide (CO) is a colorless, odorless, tasteless and toxic gas. Nicknamed "**the silent killer**", carbon monoxide is totally undetectable by human senses. Hundreds of people are killed in their home each year by accidental carbon monoxide poisoning and thousands are permanently injured.

Since carbon monoxide is a by-product of incomplete combustion, any fuel-burning appliance, vehicle or tool that is inadequately vented or maintained can be a **potential source** of carbon monoxide gas. Examples of fuel-burning equipment include:

- Fuel fired furnaces
- **Gas fueled space heaters***
- Gas ranges and ovens
- Gas clothes dryers
- Charcoal grills
- Gas water heaters
- Wood burning fireplaces and stoves
- Gas fireplaces, both vented and ventless
- Gas lawnmowers and power tools
- Automobiles

***The use of kerosene or propane space heaters is strictly prohibited in NYC.**

People are at an increased risk of carbon monoxide poisoning during the winter months. Well-insulated, airtight homes (primarily newer construction) and **malfunctioning** heating equipment can produce dangerously high and potentially deadly concentrations of carbon monoxide.

Why is Carbon Monoxide Dangerous?

If there is carbon monoxide in the air you breathe, it will enter your blood system the same way oxygen does, through your lungs. The carbon monoxide displaces the oxygen in your blood, depriving your body of oxygen. When the carbon monoxide displaces enough oxygen, you suffocate.

WHAT ARE THE SYMPTOMS OF CARBON MONOXIDE POISONING?

Long-term exposure to **low concentrations** of carbon monoxide can gradually build up in the blood causing flu-like symptoms such as headaches, fatigue, nausea and drowsiness.

Since the symptoms of carbon monoxide poisoning are so common, and often misdiagnosed, carbon monoxide poisoning should be suspected if **more than one member** of the family feels ill and if they recover after being away from the home for a period of time. Also, illness in your pets preceding illness in a family member may suggest carbon monoxide poisoning.

Exposure to **high concentrations** of carbon monoxide will cause throbbing headaches, breathing difficulties, confusion and loss of consciousness, cardiac problems and/or death.

T KILLER, CARBON MONOXIDE!

WHO IS AT GREATER RISK?

People may react differently to carbon monoxide exposure. Those particularly sensitive are:

- Senior citizens
- Infants
- Young children
- Pregnant women
- People with breathing or heart problems

The First Line of Defense is Prevention

Your first line of defense is to prevent or minimize the potential for exposure to carbon monoxide gas.

- Have your home-heating systems, fuel-burning appliances, flues and chimneys inspected, cleaned and tuned up annually by a qualified technician.
- Make regular visual inspections of fuel-burning appliances such as your gas dryer and hot water heater.
- Do not burn charcoal inside a home, cabin or camper.
- Do not operate gasoline-powered engines (generators, cutting saws) in confined areas such as garages or basements.
- Do not idle your car inside the garage.
- During and after a snowstorm, make sure vents for the gas dryer, furnace, stove and fireplace are clear of snow build-up.
- Never use gas ovens and ranges to heat your home!

The Second Line of Defense is a Carbon Monoxide Detector Alarm

Your second line of defense is to purchase and install a carbon monoxide detector alarm. A properly working carbon monoxide detector alarm can provide an early warning, before deadly gases build up to dangerous levels.

New York City law requires that every dwelling unit, including one and two family homes be equipped with carbon monoxide detector alarms, if there is fossil fuel (oil, natural gas/propane) burning equipment located in, or adjacent to, the building. Effective April 2012, new and replacement CO alarms must have an audible "end of life warning."

This life safety legislation:

- Requires that CO detector alarms have the Underwriters Laboratories **(UL) Mark**, complying with the requirements outlined in Standard **UL-2034**.
- Requires that existing dwellings install CO detector alarms that operate on batteries alone or on household electric by a plug-in type with a battery back-up,

or are hard-wired to your household electric with a battery back-up.

- Permits combination smoke and carbon monoxide detector alarms.
- Requires that CO detector alarms be installed within 15 feet of the primary entrance to all rooms used for sleeping purposes.

Note: If you intend to install a combination smoke and carbon monoxide detector alarm to replace your existing hard-wired smoke alarm, the combination detector alarm must be hard-wired.

In addition to complying with the requirements of Local Law #7 of 2004, and local Law #112 of 2013, further protect your family by installing a CO detector alarm:

- On each floor of your home.
 - In bedrooms or sleeping areas if you sleep with closed doors.
 - In the area of any fuel-burning appliance (more than five feet away) such as a furnace or water heater.
 - With a digital display that indicates the CO level.
 - These additional installations will ensure rapid detection of any potentially malfunctioning appliance.
- However, **do not install** a CO detector alarm:
- Near ceiling fans.
 - In bathrooms or other rooms with long term exposure to steam and humidity.
 - In kitchens or within 5 ft of any cooking appliance.

Carbon Monoxide Detector Alarm



Installing a carbon monoxide detector alarm does not eliminate the need for a smoke alarm in your home. Carbon monoxide detector alarms do not sense smoke and smoke alarms do not sense carbon monoxide gas.

SMOKE ALARMS SAVE LIVES !

What Should I do When My Carbon Monoxide Detector Alarm Goes Off?

If your alarm sounds, first and foremost, **STAY CALM**. Most situations resulting in activation of a carbon monoxide detector alarm are not life threatening, but an early warning of a potential problem. Carbon monoxide alarms are designed to sound before there is an immediate life threat. The alarm will also sound when the battery is low or the unit is malfunctioning.

FOR YOUR OWN PEACE OF MIND AND SAFETY YOU SHOULD FAMILIARIZE YOURSELF AND FAMILY MEMBERS WITH THE ALARM SOUND PATTERNS:

A LOW BATTERY or malfunction signal or warning will be a SINGLE "CHIRP " every 30 to 60 seconds. On some models there may also be a visual indicator, typically a flashing red light labeled Battery or Service. There should also be an audible end of life warning.

A CO ALARM will sound a PATTERN of FOUR SHORT BEEPS every 5 seconds. There is also a red flashing light on the face of the unit when CO has been detected.

IF THE CO ALARM IS ACTIVATED:

- Silence the alarm by pushing the reset/silence button.
- Ventilate the house or dwelling space by opening the windows.
- Check to see if any members of the household are experiencing flu-like symptoms.
- **Call 911 and evacuate the household to a safe location.**

When calling 911, be prepared to provide the following information:

- Your address.
- Whether anyone in the household is feeling ill with flu-like symptoms.
- The CO level reading on the detector, if equipped with digital display.

If your CO alarm reactivates within a 24-hour period, call 911 and move to fresh air. The source of the CO will need to be further investigated. Contact a qualified appliance technician to inspect all your fuel burning equipment and appliances for possible malfunction.

Exposure to the vapors of the following household substances may cause your CO alarm to sound falsely. Be sure to store and use these substances away from your carbon monoxide detector alarm or in a well-ventilated space. Paints and paint thinners, adhesives, hair spray, strong perfumes, plug-in and aerosol air fresheners and household cleaning solvents with strong odors such as pine.

Ventless Gas Fireplaces

Gas fireplaces are gaining in popularity based on their low cost, convenience and relative ease of installation. **Ventless or vent free** gas fireplaces are not vented to pipes or chimneys. The burned gases including carbon monoxide are put into the circulation of the air within your home.

BASED UPON THE HEALTH RISKS ASSOCIATED WITH THE USE OF VENTLESS GAS FIREPLACES, THEIR INSTALLATION IS ILLEGAL IN NYC.

HOW TO MAINTAIN YOUR SMOKE AND CARBON MONOXIDE DETECTOR ALARMS

TEST THE ALARMS (alarms have test buttons) at least once a month, even if your alarm uses a long-life battery or is powered by household electricity.

REPLACE BATTERIES TWICE A YEAR, in the spring and the fall when clocks are changed for daylight saving time. **(Change Your Clock, Change Your Battery).**

***Effective April 2014, all new and replacement smoke detectors must have a 10 year sealed battery, which does not require replacement.**

A "chirping" sound from the alarm is a warning that the battery is low. **REPLACE THE BATTERY** immediately.

- Never paint over alarms.
- Clean your alarms regularly by dusting or vacuuming.
- Replace smoke alarms at least every 10 years, or when the end of life warning sounds.
- Replace carbon monoxide detector alarms when the time elapsed since the installation exceeds the manufacturer's useful life of the alarm or when the end of the life warning sounds.

The sole function of smoke and carbon monoxide detector alarms are to sound a warning.

Develop and practice an escape plan to use this precious time.



**FIRE DEPARTMENT
CITY OF NEW YORK**
9 METROTECH CENTER
BROOKLYN, NEW YORK 11201-3857

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