



Amanda's Law

Carbon Monoxide Alarms

Amanda's Law was named in honor of Buffalo resident Amanda Hansen, a teenage girl who lost her life to carbon monoxide (CO) poisoning from a defective boiler when sleeping over at a friend's house in January 2009.

Beginning February 22, 2010, a new law goes into effect in New York to help protect your family from carbon monoxide poisoning.

The new law requires the following:

- CO alarms must be installed in all new and existing one and two-family dwellings, multifamily dwellings and rentals having a fuel-burning appliance, system or attached garage.
- The National Fire Protection Association (NFPA) recommends CO alarms be installed in a central location outside each sleeping area and on every level of the home.
- CO alarms must be listed to comply with UL (Underwriters Laboratories) 2034 or CSA (Canadian Standards Association) 6.19 and installed in accordance with manufacturer's instructions.
- For more information on CO, visit www.dos.state.ny.us/fire

Notice: This information is a summary interpretation of NY Law 2009, Ch. 367 and was prepared as general reference material only. This summary is not authoritative. For your specific compliance requirements, please refer to the actual language of NY Law 2009, Ch. 367 or consult legal counsel.



NEW YORK STATE DEPARTMENT OF STATE
OFFICE OF FIRE PREVENTION & CONTROL

NY STATE FIRE

Carbon Monoxide Facts

- Carbon monoxide is the leading cause of accidental poisoning deaths in the United States. (Centers for Disease Control and Prevention)
- Each year, approximately 200 people in New York State are hospitalized because of accidental CO poisoning. Many more people are treated for CO exposure in emergency rooms without further hospital care. (NYS Health Department)
- Nationally, accidental CO poisoning kills 400 people and injures another 20,000 each year. (CDC)
- Carbon monoxide is a silent killer – you cannot see it, smell it or taste it. The ONLY safe way to detect it is with a carbon monoxide alarm. Carbon monoxide alarms range in price from \$20 to \$50 depending on additional features.
- CO is produced anytime a fuel is burned. Potential sources include gas or oil furnaces, water heaters, space heaters, clothes dryers, barbecue grills, fireplaces, wood-burning stoves, gas ovens, generators, and car exhaust fumes.
- Most CO incidents happen during the winter months, mainly due to an increased use in fuel-burning appliances. Nearly all (90.5%) of New York housing uses some form of fossil-fuel burning heat source (gas, fuel oil, or kerosene), which can generate carbon monoxide. (U.S. Census)
- At high concentration levels, carbon monoxide can be fatal in minutes. CO rapidly accumulates in the blood and is attracted to the hemoglobin in your bloodstream. When breathed in, CO passes through the lungs and bonds with hemoglobin, displacing the oxygen that cells need to function.
- A January 2006 article in the Journal of the American Medical Association indicated that for individuals who had been involved in a CO poisoning and survived, there was a three-fold increase in coronary artery disease seven years later compared to non-poisoned patients.

*For more information about carbon monoxide and other fire safety information, visit
the Office of Fire Prevention and Control's website at: www.dos.state.ny.us/fire*

phone 518.474.6746 • **fax** 518.474.3240 • **email** fire@dos.state.ny.us

WWW.DOS.STATE.NY.US/FIRE

the **FACTS** about **carbonmonoxide**

1) **What is Carbon Monoxide (CO)?**

- Carbon Monoxide is a colorless, odorless and tasteless poison gas that can be fatal when inhaled.
- It is sometimes called the "silent killer."
- CO inhibits the blood's capacity to carry oxygen.
- CO can be produced when burning any fuel, such as gasoline, propane, natural gas, oil and wood.
- CO is the product of incomplete combustion. If you have fire, you have CO.

2) **Where does Carbon Monoxide (CO) come from?**

- Any fuel-burning appliance that is malfunctioning or improperly installed.
- Furnaces, gas range/stove, gas clothes dryer, water heater, portable fuel-burning space heaters, fireplaces, generators and wood burning stoves.
- Vehicles, generators and other combustion engines running in an attached garage.
- Blocked chimney or flue.
- Cracked or loose furnace exchanger.
- Back drafting and changes in air pressure.
- Operating a grill in an enclosed space.

3) **What are the symptoms of Carbon Monoxide (CO) poisoning?**

- Initial symptoms are similar to the flu without a fever and can include dizziness, severe headaches, nausea, sleepiness, fatigue/weakness and disorientation/confusion.

4) **What are the effects Carbon Monoxide (CO) exposure?**

- Common Mild Exposure – Slight headache, nausea, vomiting, fatigue, flu-like symptoms.
- Common Medium Exposure – Throbbing headache, drowsiness, confusion, fast heart rate.
- Common Extreme Exposure – Convulsions, unconsciousness, brain damage, heart and lung failure followed by death.
- If you experience even mild CO poisoning symptoms, immediately consult a physician!

5) **Are there any steps I can take to prevent Carbon Monoxide (CO) poisoning?**

- Properly equip your home with carbon monoxide alarms on every level and in sleeping areas. The only safe way to detect CO in your home is with a CO alarm.
- Every year have the heating system, vents, chimney and flue inspected by a qualified technician.
- Regularly examine vents and chimneys for improper connections, visible rust and stains.
- Install and operate appliances according to the manufacturer's instructions.
- Only purchase appliances that have been approved by a nationally recognized testing laboratory.
- Never use a gas range/stove to heat the home.
- Never leave your car idling in a closed garage or use fuel-powered appliances or tools in enclosed, attached areas such as garages or porches. Carbon monoxide can seep into your home through vents and doors.

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- 6) **Do I need a Carbon Monoxide (CO) alarm? Where should it be installed?**
- Every home with at least one fuel-burning appliance/heater, attached garage or fireplace should have a CO alarm.
 - If the home has only one CO alarm, it should be installed in the main bedroom or in the hallway outside of the sleeping area.
 - An alarm should be installed on every level of the home and in sleeping areas.
 - Place the alarm at least 15 feet away from fuel-burning appliances.
 - Make sure nothing is covering or obstructing the unit.
 - Do not place the unit in dead air spaces or next to a window or door.
 - Test the CO alarm once a month by pressing the test/reset button.
 - Every month, unplug the unit and vacuum with a soft-brush attachment or wipe with a clean, dry cloth to remove accumulated dust.
- 7) **Should my Carbon Monoxide (CO) alarm have a digital display? What does the Peak Level Memory function do?**
- A digital display allows you to see if CO is present and respond before it becomes a dangerous situation.
 - Peak Level Memory stores the highest recorded reading prior to being reset. This feature enables you to know if there was a reading while you were away from home, and also can help emergency responders determine the best treatment.
- 8) **Whom should I call if my Carbon Monoxide (CO) alarm goes off?**
- If anyone is experiencing symptoms, you need to get everyone into fresh air and call 911 from a neighbor's home. If no one is experiencing symptoms, you should call the fire department or a qualified technician from a neighbor's home to have the problem inspected. If you are unable to leave the home to call for help, open the doors and windows, and turn off all possible sources while you are waiting for assistance to arrive. Under no circumstance should an alarm be ignored!
- 9) **What are the different sensing technologies available for Carbon Monoxide (CO) alarms?**
- Most commercially available alarms for home installation use biomimetic (also called gel-cell), metal-oxide semiconductor, or electrochemical sensing technologies. Biomimetic alarms mimic the absorption of CO into the blood. Typically, semiconductor CO alarms require more energy and need to be plugged in or hard-wired.
 - Some manufacturers use advanced electrochemical sensing technology in their CO alarms. With this technology, the presence of carbon monoxide causes a chemical reaction that instigates a current flow through the circuit. Electrochemical sensors are more stable during humidity and temperature changes and resists reacting to common household chemicals that may cause false readings. Low power requirements (standard alkaline batteries) also mean that advanced features, such as digital display and Peak Level Memory, also are possible these products.