Carbon Monoxide Detectors

POISON

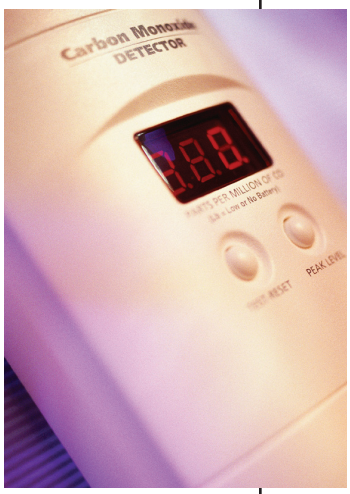
Introduction

A "silent killer."

This term describes the possible outcome of an accumulation of carbon monoxide (CO), a colorless, odorless, tasteless and potentially deadly gas, inside of a home. Inhalation of either a small concentration of CO over a long time or a higher concentration over a short time can lead to CO poisoning.

Because of several well publicized CO poisoning incidents in the 1990's, many municipalities now require the installation of CO detectors in all new residential construction or with the installation of a new oil or gas furnace or water heater. A CO detector will sound an alarm before potentially life-threatening concentrations of CO accumulate within a home.

When a CO detector does sound an alarm or a person experiences the symptoms of CO poisoning, he or she often calls the local fire department. Statistics compiled by the National Fire Protection Association for fire department response to CO incidents show that 89% of all reported CO incidents are in residential occupancies.



What CAU Recommends:

> Encourage residents to install CO detectors and test them monthly

> Encourage residents to have all fuel burning appliances inspected and serviced annually by a professional

> Do not allow vehicles to idle inside a garage; instead, back them outside

> Never operate a portable generator or other internal combustion engine inside a home or garage

> Never operate a gas or charcoal grill inside a garage

> Clear snow from appliance vents after a snowfall

> Evacuate the home and call emergency services if the CO alarm sounds

Need more information?

Additional information on CO and CO detectors is available through the Consumer Product Safety Commission (www.cpsc.gov), Underwriters Laboratories (www.ul.com), the National Fire Protection Association (www.nfpa.org) and other sources.

Associations may request additional information on this topic by contacting CAU's Loss Control Department.

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{General Liability}

Where Does CO Come From?

CO is a combustion by-product produced through incomplete burning of carbon-based fuels such as natural or liquefied petroleum (LP) gas, propane, oil, wood and gasoline. A build up of CO can happen when an appliance malfunctions or there is a leak or blockage in the vent for an appliance. Common sources of CO within a residence include:

- Heaters and water heaters
- Fireplaces and wood stoves
- Cooking appliances
- Gas clothes dryers
- Idling automobiles in garages
- Portable gasoline powered lawn and garden equipment
- Portable generators
- Gas or charcoal barbecues

Remember, CO is odorless, tasteless, and colorless so it is undetectable by the senses.

CO Poisoning

Inhalation of any concentration of CO will replace oxygen in the blood with CO and deprive the heart, brain and other major body organs of oxygen. The concentration of CO in air, measured in parts per million (ppm), is a determining factor in the type of symptoms that a healthy adult may experience and when the symptoms will appear.

The initial symptoms of CO poisoning will often mimic those of the flu but without the associated fever, symptoms may include headache, nausea, dizziness, shortness of breath and fatigue. A lower concentration of CO may have more pronounced effects in infants, pregnant women and people with emphysema, asthma or other diseases that limit the body's ability to use oxygen more than the average, healthy adult.

The health effects of exposure to CO concentrations below 70 ppm are uncertain but should not have adverse effects on most healthy adults. As CO concentrations increase and remain above 70 ppm, the initial flu like symptoms will become more noticeable. Once CO concentrations exceed 150 to 200 ppm, disorientation, unconsciousness and death are possible.

As the concentration of CO increases in an enclosed space, the symptoms of CO poisoning will appear sooner but, more importantly, a person may lose consciousness sooner as well. A CO concentration of just over 1% in air (12,800 ppm) can cause a person to lose consciousness in as little as 1 to 3 minutes.

The initial treatment for CO poisoning starts with removing the person from the poisonous environment to fresh air. Poisoned individuals are usually provided with oxygen to displace the CO in the bloodstream and in severe cases may receive hyperbaric oxygen treatment.

CO Detectors

CO detectors will detect elevated levels of CO and sound an alarm to alert occupants of a potential poisoning risk. Many newer homes are equipped with CO detectors, but the majority of older homes may not have this safety device installed.

Every home that has fuel burning appliances, fireplaces or an attached garage should have CO detectors installed on every level of the home and in a central location outside each sleeping area. The detectors should meet the requirements of ANSI/UL 2034, Standard for Single and Multiple Station Carbon Monoxide Alarms and be installed according to the manufacturer's instructions.

While associations usually have no responsibility to install items within a "unit," they should still encourage residents to install CO detectors in their homes to provide a significant level of protection against potentially fatal carbon monoxide exposure.