



Carbon Monoxide Safety

What is Carbon Monoxide (CO)?

Carbon monoxide is a colorless, odorless, extremely poisonous and explosive gas that causes 1,500 accidental deaths and more than 10,000 injuries each year. CO is slightly lighter than air and mixes throughout the atmosphere. It is a by-product of incomplete combustion, produced when fuels such as natural gas, propane, heating oil, kerosene, coal, charcoal, gasoline or wood are burned with insufficient air.

Effects of CO Poisoning

When a person breathes in carbon monoxide, it is absorbed by hemoglobin, the oxygen-carrying protein in the blood. "Carboxy hemoglobin" is then formed, replacing oxygen, preventing its release in the body and eventually causing suffocation.

▶ **Mild Exposure:** Flu-like symptoms including slight headache, nausea, vomiting and fatigue.

▶ **Medium Exposure:** Severe headache, drowsiness, confusion and a fast heart rate. Prolonged exposure to medium levels of CO can result in death.

▶ **Extreme Exposure:** Loss of consciousness, convulsions, heart and lung failure, possible brain damage and death.

While everyone is at risk for CO poisoning, unborn babies, infants and young children, senior citizens and people with heart and lung problems are at a higher risk due to their greater oxygen needs.

Possible Sources of CO

- ▶ Gas stoves
- ▶ Hot water heaters
- ▶ Fireplaces
- ▶ Lawnmowers
- ▶ Pilot lights
- ▶ Gas or oil furnaces
- ▶ Car exhaust fumes
- ▶ Wood-burning stoves
- ▶ Charcoal
- ▶ Gas space heaters
- ▶ Tobacco smoke

How to Prevent CO Poisoning

- ▶ Inspect flues and chimneys for cracks, corrosion, holes, debris or blockages.
- ▶ Buy fuel-powered heaters with automatic shut-off features.
- ▶ Fuel heaters in well-ventilated areas.
- ▶ Service heaters before the first use of winter season.
- ▶ Open windows periodically. Homes with energy-efficient insulation can trap CO-polluted air inside.
- ▶ Use a gas stove for cooking purposes only.
- ▶ Operate gas-burning appliances in a well-ventilated room.
- ▶ Never leave a car running in a garage.
- ▶ Use charcoal grills outdoors, never indoors.
- ▶ Install and maintain carbon monoxide detectors.

Choosing a CO Detector

There are three types of CO detectors available: Biomimetic, Semiconductor and Electrochemical. While each has specific features and qualities, all will alert owners to danger. For all CO detectors, a continuous siren signals a full alarm; a repetition of loud pulsating beeps means there is a CO build-up; and a short chirp every minute alerts you to a malfunction or low battery.

Installing a CO Detector

Install CO Detectors near bedroom areas and family rooms. Do not install them near air vents or fans. Place them in the center of the room where they can measure the overall general atmospheres. For extra protection, place one about 15 feet away from your home's heat source.

To avoid nuisance alarms, do not put a CO detector in the kitchen, garage, utility room, basement, bathroom or unventilated rooms where cleaning supplies are kept. Chemical fumes, humidity and very hot or very cold temperatures will affect the performance of a detector.

If the Alarm Sounds

If the alarm sounds and anyone in the house has symptoms of CO poisoning:

- ▶ Leave the house immediately and call 9-1-1 or an emergency response number.
- ▶ Have someone contact the fire department and consult the local fuel company.

If your alarm goes off and no one has symptoms of CO poisoning:

- ▶ Turn off all fuel-burning appliances that are possible sources of CO.
- ▶ Open windows to air out the house.
- ▶ Contact the local fuel company or a licensed technician to repair the problem.

For more information and other safety tips, go to www.csvfd.com