



Maintaining the Home

Carbon Monoxide Alarms

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Alarming Carbon Monoxide Poisoning Statistics

Each year, more than 10,000 Americans are temporarily or permanently disabled by accidental exposure to carbon monoxide (CO).

CO poisoning deaths attributed to motor vehicle exhaust account for about 60 percent of all accidental, non-fire CO poisoning deaths. The remaining 40 percent of deaths are associated with consumer products. Most of the non-fire, consumer product-related CO poisoning deaths are associated with the use of heating systems.

Other consumer products associated with poisoning deaths include charcoal grills, gas water heaters, camping equipment, gas ranges and ovens. On average, more than 10,000 people are treated each year in hospital emergency rooms for non-fire, CO poisoning injuries associated with consumer products, excluding incidents involving auto exhaust.

Carbon Monoxide Poisoning and its Effects

CO is a clear, odorless gas that is a by-product of combustion of fuels like natural gas, liquid propane (LP), coal, oil and wood. It is poisonous to humans and pets.

There are no perceptible symptoms if an individual's CO levels are less than 10 percent. At 10 percent levels, an individual may experience symptoms that mimic the flu or a cold such as headache, fatigue, difficulty in thinking straight, irregular breathing and heartbeat, nausea or

coughing. The victim may appear pale, but develop cherry red color on the lips and ear tips. Take note especially if everyone in the home is experiencing at least some of the symptoms, and pay particular attention if pets exhibit symptoms since animals cannot get the flu.

At levels greater than 20 percent, a person can lose consciousness, go into a coma or die.

If CO poisoning is suspected, call 911 from a neighbor's house and get everyone into the fresh air immediately. Report it to the fire department even if everyone is feeling better.

According to a study by the University of Connecticut Medical Center and Hartford Hospital, there is also a connection between extended low-level CO exposure and brain damage. Neuro-psychological problems, such as short-term memory loss and behavioral changes were found in patients exposed to low levels. The study could not determine how long one would have to be exposed to low levels of CO before damage occurs. Most patients are unaware that they are being exposed. The study also seemed to indicate the damage was equally serious for all ages.

What can cause carbon monoxide poisoning?

Defective furnaces, fireplace flues and oil heaters have long been the primary cause of accidental CO poisoning. This winter, the average furnace will turn on and off nearly 9,000 times. When equipment works this hard, annual maintenance

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by a qualified contractor is the best way to keep heating and venting systems running safely and efficiently. In addition to an annual inspection, follow these tips to check for safety:

- Check the furnace flame. Flames should be mostly blue and steady.
- Look for buildup. Discoloration or soot buildup around the burner access door and vents could signal a problem.
- Check the venting system. Soft, rusted or broken vent piping can release combustion products indoors.
- Examine the furnace or boiler. See that it's free of dust, rust or any other signs of corrosion.
- Check air filters regularly. Clean or replace them as needed.
- Make sure furnace panels and grill are in place and the fan compartment door is closed when the furnace is on. Leaving these doors open could cause CO to build up in living areas.

These checks do not replace the need for an annual checkup of the heating system before the start of the heating months. To protect your family against accidental CO poisoning, make sure the furnace and appliances receive annual checks by a qualified gas appliance or heating contractor.

In addition, gas appliances, including stoves, clothes dryers, water heaters and gas furnaces, are sources of CO. For gas appliances, CO is vented out of the house. However, sometimes the vent system is not installed correctly or does not work properly, forcing CO back into the house.

Automobiles also are a CO source. For automobiles, the CO from the exhaust can be controlled from entering living spaces by lowering the garage floor below the main floor of the house and placing vent holes at the bottom of the exterior garage walls for the CO gas to escape. In many states, this is required by code.

Installation of Carbon Monoxide Detectors

It is a good idea to have CO detectors/alarms in your house. CO weighs about the same as air, so detectors can be mounted at any height. In the State Farm Good Neighbor House®, we do not have gas-burning appliances, but installed a CO detector in the laundry room for demonstration purposes. This alarm is interconnected to the smoke alarm system so if the CO detector/alarm senses a problem, it will sound along with all of the smoke alarms in the house. Having an interconnected system better the chance of hearing the alarm even if far away from the detector that sensed the problem.

Install a CO detector on each level of your home, and in or near each sleeping area. Try to keep the detectors at least 20 feet from any fuel burning appliances and at least 10 feet from high humidity locations like bathrooms and kitchens. If an alarm sounds, call a professional to check your gas burning appliances.

Testing Your Carbon Monoxide Detector/Alarm

One can determine if a CO detector/alarm is working by using special CO alarm testing devices. These devices simulate CO using a small pellet in a package. When the pellet is moistened, it releases a non-toxic gas. After a few minutes, if the alarm is properly working, the alarm should sound. For more information about these testing devices, check with your local hardware store.

This material was adapted from publications produced by State farm Insurance. State Farm information can be found on the Web at <http://www.statefarm.com/consumer>.

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*This resource is one in a series on **Maintaining the Home** which include:*

Interior Maintenance

Preventive Home Maintenance Checkup
Make a Basic Toolkit for Simple Home Repairs
Selection and Use of Home Cleaning Products
Discovering the Secrets of Successful Storage

Heating

Furnace Care
Fireplace and Chimney Care

Cooling

Evaporative Cooler
Air Conditioner
Ceiling Fans

Plumbing

Fixing Plugged Sink Drains
How to Unclog a Toilet
Repairing Dripping Faucets

Electrical

How to Set or Reset a Circuit Breaker
How to Replace a Fuse

Appliances

How to Buy an Energy Efficient Home Appliance
Choosing a Water Heater

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Dryer Care and Dryer Cleaning
Freezer Care and Freezer Cleaning
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Range and Oven Care and Range Cleaning
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Wood Floors Care and Cleaning
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Wallpaper Selection and Cleaning
Repairing Walls

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Selecting Fabric For Home Furnishings

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Foundations, Basements and Yards
Exterior Walls, Windows, and Doors

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Watering Your Lawn

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Carbon Monoxide Alarms
Are Your Children Safe From Poisons?
Protecting Yourself Against Burglary

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