



Home Tips



• CHRISTIAN BUILDING INSPECTORS, INC., 3697 HABERSHAM LANE, DULUTH, GEORGIA 30096, 770-849-0920 • MARCH 2009 •



Carbon Monoxide Poisoning?

Our furnace is 18 years old, and we have been told older furnaces could give off carbon monoxide. Is this true?

Yes it is. Furnaces could be the most dangerous items in the home. Furnaces over 12 years old can start rusting in the inside burner compartment called the “heat exchanger.”

Severe rust can result in holes in the heat exchanger where carbon monoxide can leak into the heated supply air and be circulated throughout the home. All older furnaces should have the heat exchangers inspected each fall before the furnace is used.

1. What is carbon monoxide (CO), and how is it produced?

Carbon monoxide (CO) is a deadly, colorless, odorless, poisonous gas. It is produced by the incomplete burning of various fuels, including coal, wood, charcoal, oil, kerosene, propane, and natural gas. Products and equipment powered by internal

combustion engine-powered equipment such as portable generators, cars, lawn mowers, and power washers also produce CO.

2. What are the symptoms of CO poisoning?

Because CO is odorless, colorless, and otherwise undetectable to the human senses, people may not know that they are being exposed. The initial symptoms of low to moderate CO poisoning are similar to the flu (but without the fever). They include:

- Headache
- Fatigue
- Shortness of breath
- Nausea
- Dizziness

High level CO poisoning results in progressively more severe symptoms, including:

- Mental confusion

- Vomiting
- Loss of muscular coordination
- Loss of consciousness
- Ultimately death

Symptom severity is related to both the CO level and the duration of exposure. For slowly developing residential CO problems, occupants and/or physicians can mistake mild to moderate CO poisoning symptoms for the flu, which sometimes results in tragic deaths. For rapidly developing, high level CO exposures (e.g., associated with use of generators in residential spaces), victims can rapidly become mentally confused and can lose muscle control without having first experienced milder symptoms; they will likely die if not rescued.

3. How can I prevent CO poisoning?

- Make sure appliances are installed and operated according to the manufacturer's instructions and local building codes. Most appliances should be installed by qualified professionals. Have the heating system professionally inspected and serviced annually to ensure proper operation. The inspector should also check chimneys and flues for blockages, corrosion, partial and complete disconnections, and loose connections.
- Never service fuel-burning appliances without proper knowledge, skill and tools. Always refer to the owner's manual when performing minor adjustments or servicing fuel-burning equipment.
- Never operate a portable generator or any other gasoline engine-powered tool either in or near an enclosed space such as a garage, house, or other building. Even with open doors and windows, these spaces can trap CO and allow it to quickly build to lethal levels.
- Install a CO alarm that meets the requirements of the current UL 2034 or CSA 6.19 safety standards. A CO alarm can provide some added protection, but it is no substitute for proper use and upkeep of appliances that can produce CO. Install a CO alarm in the hallway near every separate sleeping area of the home. Make sure the alarm cannot be covered up by furniture or draperies.
- Never use portable fuel-burning camping equipment inside a home, garage, vehicle or tent unless it is specifically designed for use in an enclosed space and provides instructions for safe use in an enclosed area.
- Never burn charcoal inside a home, garage, vehicle, or tent.
- Never leave a car running in an attached garage, even with the garage door open.
- Never use gas appliances such as ranges, ovens, or clothes dryers to heat your home.
- Never operate unvented fuel-burning appliances in any room where people are sleeping.



- Do not cover the bottom of natural gas or propane ovens with aluminum foil. Doing so blocks the combustion air flow through the appliance and can produce CO.
- During home renovations, ensure that appliance vents and chimneys are not blocked by tarps or debris. Make sure appliances are in proper working order when renovations are complete.

4. What CO level is dangerous to my health?

The health effects of CO depend on the CO concentration and length of exposure, as well as each individual's health condition. CO concentration is measured in parts per million (ppm). Most people will not experience any symptoms from prolonged exposure to CO levels of approximately 1 to 70 ppm but some heart patients might experience an increase in chest pain. As CO levels increase and remain above 70 ppm, symptoms become more noticeable and can include headache, fatigue and nausea. At sustained CO concentrations above 150 to 200 ppm, disorientation, unconsciousness, and death are possible.

5. What should I do if I am experiencing symptoms of CO poisoning and do not have a CO alarm, or my CO alarm is not going off?

If you think you are experiencing any of the symptoms of CO poisoning, get outside to fresh air immediately. Leave the home and call your fire department to report your symptoms from a neighbor's home. You could lose consciousness and die if you stay in the home. It is also important to contact a doctor immediately for a proper diagnosis. Tell your doctor that you suspect CO poisoning is causing your problems. Prompt medical attention is important if you are experiencing any symptoms of CO poisoning. If the doctor confirms CO poisoning, make sure a qualified service person checks the appliances for proper operation before reusing them.

6. Are CO alarms reliable?

CO alarms always have been and still are designed to alarm before potentially life-threatening levels of CO are reached. The safety standards for CO alarms have been continually improved and currently marketed CO alarms are not as

susceptible to nuisance alarms as earlier models.

Most of the devices cost under \$100. Each home should have at least one carbon monoxide detector in the area outside individual bedrooms. CPSC believes that carbon monoxide detectors are as important to home safety as smoke detectors are.

Source: <http://www.cpsc.gov/cpscpub/pubs/466.html>

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Quote Of The Month

"I HAVE NEVER LET MY SCHOOLING INTERFERE WITH MY EDUCATION."

MARK TWAIN

A Tip Of The Hat To:

Jennifer & Shack Lewis

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