



carbon monoxide: tips for detecting the gas and preventing tragedy

You cannot see or smell carbon monoxide, but at high levels it can kill. Carbon monoxide (CO) is a colorless, odorless, tasteless, and toxic gas. It is produced as a by-product of all combustion processes. Any fuel-fired appliance, vehicle, gasoline powered tools or other device has the potential to produce dangerous levels of CO. When appliances are kept in good working condition, they produce little CO. Improperly maintained appliances, however, can produce fatal CO concentrations in your home. The Consumer Products Safety Commission reports that more than 200 people in the United States die from CO poisoning every year.

When carbon monoxide is inhaled, it bonds with part of the red blood cells called hemoglobin. This results in a lack of oxygen to the blood cells. The brain and the heart require large amounts of oxygen and quickly suffer from any oxygen shortage. Because carbon monoxide reduces oxygen delivery to the brain, persons with elevated levels of carbon monoxide do not think clearly and may not recognize the warning signs.

High concentrations of carbon monoxide can kill in less than five minutes. Continued exposure can cause irreversible damage to the nervous system, personality deterioration and severe memory loss.

Health effects

- CO poisoning symptoms may mimic flu symptoms. Common symptoms include headache, fatigue, nausea, dizziness and confusion. Because the symptoms mimic so many illnesses, it is often misdiagnosed.
- Continued exposure can lead to vomiting, weakness and difficulty breathing.
- High exposure may result in loss of consciousness, convulsions and death.
- Presence of CO may worsen underlying heart disease by causing heart irregularity and muscle weakness.

What to do in an emergency

If you believe that you are suffering from CO poisoning:

- Open doors and windows and leave the vicinity immediately.
- Notify your fuel supplier or a competent mechanical contractor.
- Inform your primary health provider that you were exposed to CO. CO poisoning can often be diagnosed by a blood test, if done soon after the exposure.

Tips

- Never burn charcoal inside a home, garage, vehicle, or tent.
- Never use unvented fuel-burning camping equipment inside a home, garage, vehicle, or tent.
- Never leave a vehicle running in an attached garage, and minimize the amount of time the vehicle is in the garage when you start it each morning, even with the garage door open. Move the vehicle out as soon as possible after starting.
- Have a competent contractor service your fuel-fired appliances on a regular basis (*every 1 to 2 years*).
- Never use gas appliances such as ranges, ovens, or clothes dryers for heating your home.
- Never operate unvented fuel-burning appliances in any room without adequate ventilation or in any room where people are sleeping.
- Do not use, or service, gasoline-powered tools and engines indoors or in attached garages.

About carbon monoxide alarms

Carbon monoxide alarms should meet Underwriters Laboratories, Inc. standards. Check the packaging or product for a UL label. In addition, they should have a long-term warranty and be easily self-tested and reset to ensure proper operation. Some carbon monoxide alarms may have dual

such as smoke and carbon monoxide alarms. If these dual units were to go into alarm, do not wrongly assume they are malfunctioning in the absence of smoke. Battery powered devices should have the batteries changed yearly (*pick a date that you will remember, such as birthdays or holidays, for changing batteries*). The Consumer Products Safety Commission recommends that a carbon monoxide detector be placed on each level of your home, with a minimum of one near each sleeping area.

What to do if the CO alarm goes off

- Check to see if any member of the household is experiencing symptoms of CO poisoning. If they are, have them leave the home and see a physician immediately or call 911.
- If no one is feeling symptoms, open windows and doors to allow fresh air in and notify your fuel supplier. Make sure to turn off all potential sources of CO—your oil or gas furnace, gas water heater, gas range and oven, gas dryer, gas or kerosene space heater and any vehicle or small engine.
- Have a qualified technician inspect your fuel-burning appliances and chimneys to make sure they are operating correctly and that there is nothing blocking the fumes from being vented out of the house.

For further information:

- American Lung Association®: www.LungUSA.org
- American Lung Association® of the Upper Midwest Health House®: www.HealthHouse.org
- Consumer Products Safety Commission (CPSC): www.CPSC.gov/CPSCPUB/PUBS/cospot
- Center for Disease Control and Prevention: www.CDC.gov/nceh/airpollution/carbonmonoxide/checklist
- Environmental Protection Agency (EPA): www.EPA.gov/iaq
- Local Health Department

These tips are brought to you by the American Lung Association® Health House® program.

For more information on creating a healthier home environment, visit our website at www.HealthHouse.org.



Raising the Standards for Healthier Indoor Environments.

490 Concordia Avenue
St. Paul, MN 55103.2441

Ph - 651.268.7614

Fx - 651.281.0242

Toll-free - 877.521.1491

www.HealthHouse.org