

## Carbon Monoxide

### Should you be concerned?

#### What is carbon monoxide (CO)?

It's a colorless, odorless gas produced by incomplete combustion of all carbon fuels.

#### What are common sources for carbon monoxide?

Carbon monoxide can be produced by:

- Heating equipment (furnaces, water heaters, fuel-fired space heaters)—both natural gas and kerosene.
- Wood or coal stoves
- Fireplaces
- Cook tops and ovens
- Charcoal grills
- Engines (gasoline, diesel)
- Boat engines, other gas-powered recreational vehicles
- Tobacco smoke
- Improper use of generators

#### How can it affect you?

Carbon monoxide poisoning can be extremely serious! It can cause the following health problems:

- Low levels can cause headaches, drowsiness, and dizziness - symptoms often mistaken for the flu.
- Higher levels impair human respiration, vision, and brain functioning and cause nausea and mental confusion.
- Very high levels can quickly cause death!

#### How can you know it's there?

- Install CO detectors on each level of your home, in your mobile home or houseboat and other enclosed areas where heating equipment or motors use carbon fuels.
- Request testing by a qualified service technician.

#### What can you do about it?

- Have a trained professional inspect, clean, and tune-up central heating system (furnaces, flues, and chimneys) annually.
- Make sure your furnace has adequate intake of outside air.
- Install and use an exhaust fan vented to the outdoors over gas stoves.
- Supply adequate outdoor make-up air for combustion.
- Choose vented appliances whenever possible. Direct-vent all combustion exhaust, including gas dryers, to outside.
- Open flues when using fireplaces.
- Never warm up a car in an attached garage.
- Never use a charcoal grill indoors.
- Put generators outdoors. Never use a generator inside homes, garages, crawlspaces, sheds, or similar areas. Deadly levels of carbon monoxide can quickly build up in these areas and can linger for hours, even after the generator has shut off.
- If necessary to use kerosene space heaters and unvented gas heaters for short periods of time during power outages, use them only in well ventilated areas. Always open a window for adequate ventilation!

- Never use an unvented combustion heater overnight or in a room where you are sleeping. Carbon monoxide levels from combustion heaters can reach dangerous levels.
- Install carbon monoxide detectors with an audible alarm in your home and garage.

### **What about carbon monoxide detectors?**

- Carbon monoxide detectors should meet Underwriters Laboratories, Inc. standards; have a long-term warranty; and be easily self-tested and reset to ensure proper functioning.
- For maximum effectiveness during sleeping hours, CO detectors should be placed as close to sleeping areas as possible.
- Check or replace the battery when you change the time on your clocks each spring and fall.

### **What should you do if the carbon monoxide alarm goes off?**

- Make sure the alarm is from your carbon monoxide detector and not your smoke detector. If the detector sounds, leave your home immediately and call 911.
- Check to see if any member of the household is experiencing symptoms of poisoning. If so, seek medical attention. Tell the doctor that you suspect CO poisoning.
- If no one is feeling symptoms, ventilate the home with fresh air, 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 nothing is blocking the fumes from being vented out of the house.

### **Where can you get more information about carbon monoxide?**

- Contact your local county extension office.
- Go to the Web page of the U. S. Environmental Protection Agency:
  - Publication EPA-402-F-96-005. **Protect Your Family and Yourself from Carbon Monoxide Poisoning:**
    - English: [http://www.epa.gov/iaq/pdfs/co\\_factsheet\\_en.pdf](http://www.epa.gov/iaq/pdfs/co_factsheet_en.pdf)
    - Spanish: [http://www.epa.gov/iaq/pdfs/co\\_factsheet\\_sp.pdf](http://www.epa.gov/iaq/pdfs/co_factsheet_sp.pdf)
- Go to the Web page of the Consumer Product Safety Commission:
  - Safety Alert publication on Portable Generator Hazards: <http://www.cpsc.gov/cpsc/pub/pubs/portgen.html>
  - CPSC Document #466, **Carbon Monoxide Questions and Answers:** <http://www.cpsc.gov/cpsc/pub/pubs/466.html>
- Browse the Web page of the American Lung Association: [www.lungusa.org](http://www.lungusa.org)
- Visit the Web page of Healthy Indoor Air for America's Homes: [www.montana.edu/wwwcxair/](http://www.montana.edu/wwwcxair/)

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Information adapted from Common Indoor Air Pollutants: Sources and Health Impacts, HF-LRA.161 and Indoor Air Pollutants: Detection and Control Measures, HF-LRA.162

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