Carbon Monoxide

Should You Be Concerned?

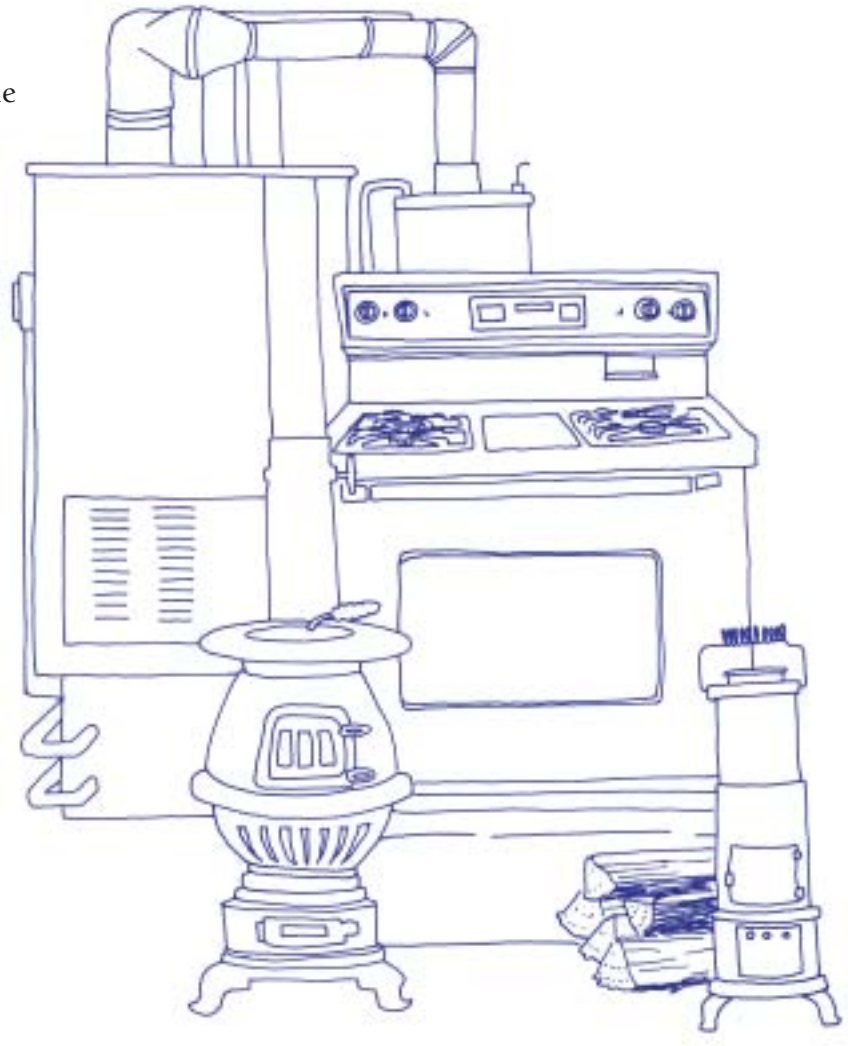
You can't see, taste, feel, or smell carbon monoxide (CO). However, this deadly gas can make you very sick or even kill you. Over 5,000 people in the United States die every year after breathing too much CO. The signs of CO poisoning seem like the flu. Many people don't even know they've been breathing in CO. People who survive can suffer brain damage, lose their sight or hearing, or have heart problems. It is a major threat to your family's health. The good news is that you can prevent CO poisoning. This section will help you ask the right questions to find out if the air in your home is safe and healthy.

There can be so much CO in a burning building that breathing smoke for as little as one minute can kill you. Lower levels, such as from smoking, do not kill right away. They can cause many other health problems though. Children, unborn babies, people with asthma, older adults, or people with heart or lung problems are more likely to get hurt from breathing CO. But remember, CO harms even healthy people.

Where Does CO Come From?

Fuel-burning appliances use gas, oil, or wood to produce heat. If they are not working right, they can make CO. Most gas appliances that have been put in and taken care of properly are safe and make very little CO. Electric appliances do not burn fuel and so make no CO. Common sources of CO include:

- Gas and oil furnaces, boilers, and water heaters
- Wood-burning fireplaces and stoves
- Gas appliances like ovens, stoves, or dryers
- Gas and kerosene space heaters
- Gas and charcoal grills
- Cars, trucks, campers, tractors, and other vehicles
- Gasoline and liquid propane (LP)-powered small equipment, including lawn mowers, snow blowers, chainsaws, pressure washers, and electric generators
- Recreational vehicles, including boat motors, all terrain vehicles (ATVs), ski-boats, and generators in campers and houseboats
- Tobacco smoke
- House fires
- Blocked chimneys and flues



Breathing in low levels of CO can hurt your brain, heart, or other parts of your body. At high levels, the brain is so short of oxygen that you cannot think clearly. You lose control of your muscles and may be unable to move to safety. High-level CO poisoning can cause loss of consciousness, coma, and death.

There are simple but important steps to take to find out if your family is at risk for CO poisoning. The questions on the following page will help you do that. Page 27 will give you ideas of what to do to keep the air in your home safe to breathe.

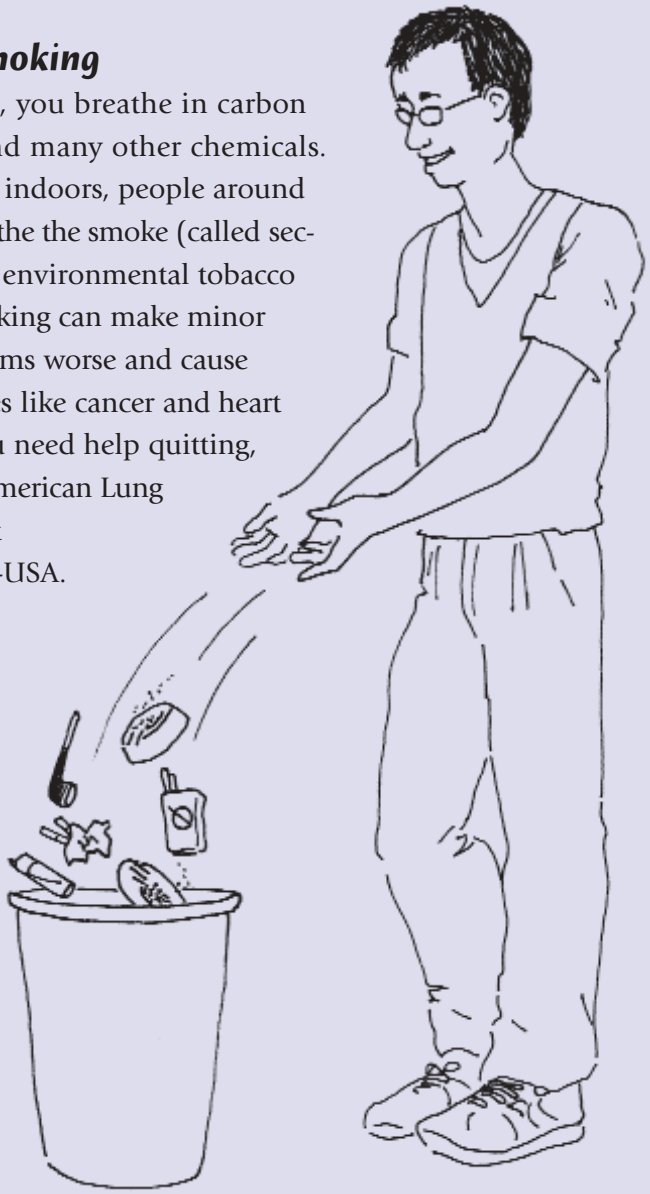
What are the Signs of CO Poisoning?

People often think CO poisoning is the flu. That's because it can feel like the flu. Signs of low-level CO poisoning may include:

- Headache
- Nausea
- Vomiting
- Dizziness
- Confusion
- Tiredness
- Weakness
- Sleepiness
- Tightness in the chest
- Trouble breathing

CO and Smoking

If you smoke, you breathe in carbon monoxide and many other chemicals. If you smoke indoors, people around you also breathe the smoke (called second-hand or environmental tobacco smoke). Smoking can make minor health problems worse and cause major diseases like cancer and heart disease. If you need help quitting, contact the American Lung Association at 1-800-LUNG-USA.

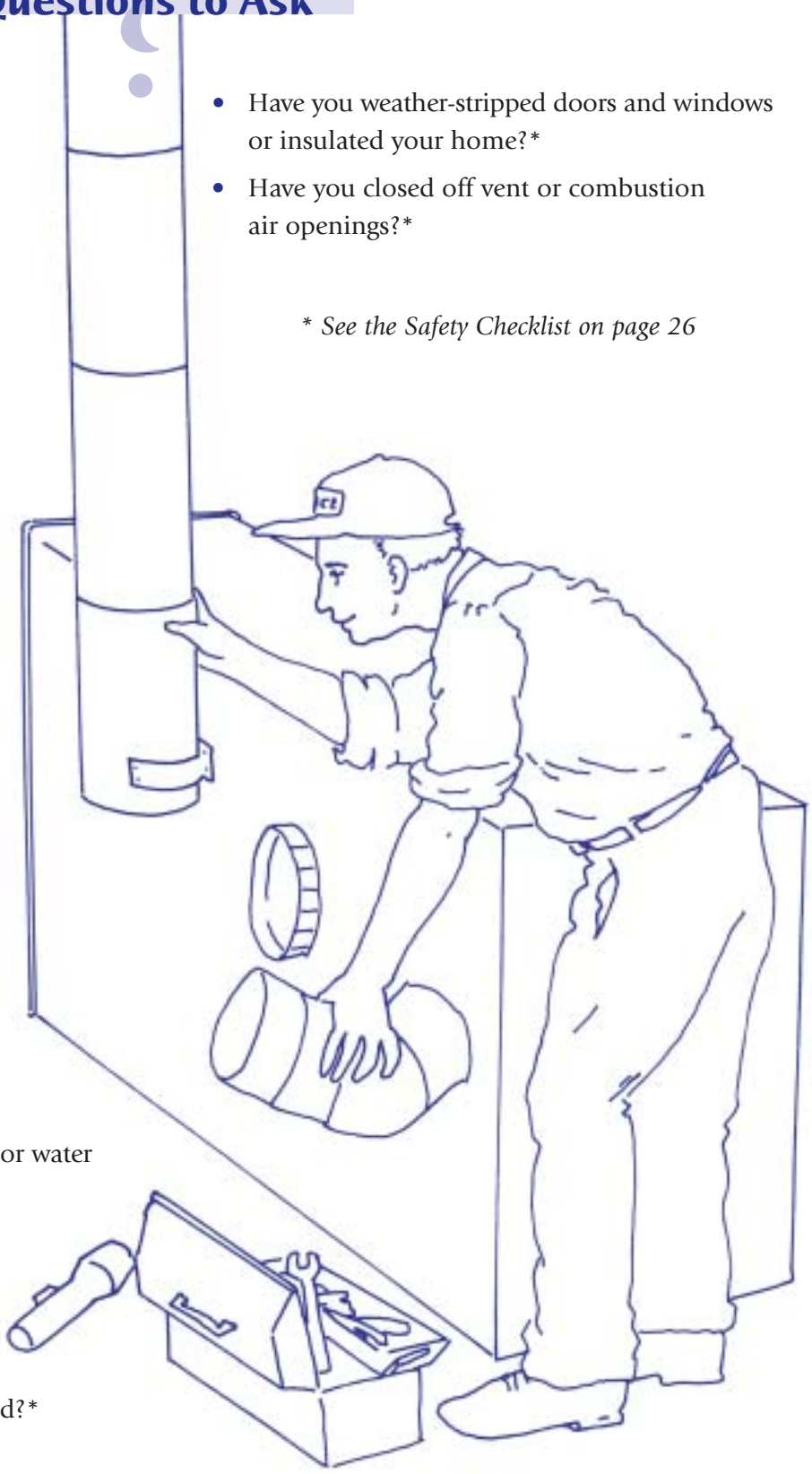


FACT

Questions to Ask

- Do you sometimes use charcoal grills or small gasoline engines inside your home, garage, or closed-in porch?
- Do you have an attached garage?
- Do you sometimes warm up your car inside the garage?
- Has it been more than one year since you or your landlord had your furnace, fireplace, wood stove, or chimney inspected or cleaned?
- Do you ever use a gas or kerosene space heater or a vent-free gas fireplace?
- Does your home have a carbon monoxide alarm?
- Do you ever use the kitchen stove or oven to heat your home?
- Do you sometimes forget to turn on the kitchen exhaust fan when using the oven?
- Do some of the burners on the kitchen stove burn yellow or orange?*
- Does smoke from the fireplace sometimes come back into the room?
- Are your appliances and furnace in good shape?
- Are the vent pipes for your furnace, boiler, or water heater rusty or falling apart?*
- Do you have a gas water heater that does not have a vent?*
- Is there rust, soot, or dirt on your furnace, boiler, or water heater?*
- Is your furnace or boiler over ten years old?*
- Have you weather-stripped doors and windows or insulated your home?*
- Have you closed off vent or combustion air openings?*

** See the Safety Checklist on page 26*



ACTION STEPS

- *Never* use charcoal grills or run engines inside your home, garage, or basement even for a short time. Charcoal grills and small gasoline engines make a lot of carbon monoxide. Even opening all the windows and doors will not give you enough fresh air to prevent CO poisoning.
- *Never* warm up a vehicle inside the garage. Warming up your car, truck, or motorcycle on a cold day for just a couple of minutes (even with the garage door open) can make enough CO to make you sick. Start lawnmowers, snow blowers, and other yard equipment outdoors.
- Have a heating contractor check your furnace, chimneys, and other sources of CO every fall to make sure everything is okay. (You can find one in the telephone book.) Make sure they use a tool that measures CO. To get harmful gases out of a home, many heating appliances have chimneys. (Chimneys on gas appliances are called vents). The chimney carries CO and other gases from the appliance outdoors. If your appliances and vents are working right there should be little CO. If you rent, ask your landlord to have the heating system checked.
- Make sure chimneys are in good shape—clean and working right. Have your chimney, wood-burning fireplace, or wood stove swept every year. Burning wood nearly always makes a lot of CO. It is very important that all the smoke goes out the chimney.
- If you use unvented kerosene or gas heaters OR a vent-free gas fireplace, follow instructions carefully and open a window for fresh air. Do not use them while sleeping.

Safety Checklist

If you answered *yes* to any of the starred questions on page 25 pay special attention to this checklist. Remember, putting in and taking care of heating appliances like stoves and furnaces can be dangerous. Only trained and qualified workers should do this.

- Turn off an appliance or heater that starts making different noises, smells funny, starts sooting, has a different-looking flame, or does not seem to be working right. Call a heating contractor for repairs.
- Read and follow the instructions that came with your appliance or unvented gas heater.
- Provide good ventilation for all heating appliances.
- Keep all wood, paper, cloth, and furniture away from heating appliances.
- Don't block an appliance's air openings.
- Have all appliances checked every year by a qualified heating contractor.
- Ask the contractor to check for carbon monoxide and look at the vent (chimney) system.
- If you insulate and weather-strip your home, call a heating contractor to make sure there is still enough ventilation.
- If you smell gas or if the smoke detector or the carbon monoxide alarm goes off, leave the building right away and call 9-1-1.

ACTION STEPS, continued

- Put carbon monoxide alarms near each sleeping area and on each floor of your home. (Older models are called carbon monoxide detectors.) You can find them at your local hardware, discount, outlet, or building supply store for $20 to $50.
- Never use the kitchen stove or oven to heat your home.
- Always turn on the kitchen exhaust fan when using the oven.
- Have the kitchen stove fixed before using it if the flames burn orange or yellow.
- Don't use a smoking fireplace until you fix the problem.

Carbon Monoxide Alarms

Carbon monoxide (CO) alarms will help protect you and your family from sickness or death. A good alarm will make a loud noise when CO levels become too high. There are plug-in and battery operated alarms. Look on the package to make sure the alarm is okayed by a qualified testing laboratory, such as Underwriters Laboratory (UL). Check the batteries on a battery-operated alarm every six months. Every home should have at least one alarm. It's best to put one near each sleeping area and on each level of the home. Carbon monoxide alarms do not take the place of checking and taking good care of your home's furnace, fireplace, or space heaters.

If someone in your family shows signs of CO poisoning or if a CO alarm goes off:

- Get outside right away.
- Call 9-1-1 or your local emergency number from a phone outside your home.
- See a doctor or nurse right away. See a doctor or nurse even if you feel better after breathing fresh air. They can check your blood and breath for CO and tell if you need more medical care.
- Treat all alarm soundings as an emergency. Never ignore an alarm sounding!
- Have your home checked out by a qualified heating contractor. You can find one in the telephone book.
- Don't go back home until all problems have been fixed.

When In Doubt, Check It Out!

- Your local county Extension Office —look in your telephone book
- Your local or state health department —look in your telephone book
- Iowa State University Cooperative Extension —www.extension.iastate/edu/pages/co/co1.html
- The Consumer Products Safety Commission 800/638-2772—www.cpsc.gov/cpscpub/pubs/466.html
- The American Lung Association, 800/LUNG-USA —www.lungusa.org/air/carbon_facstsheet99.html
- Healthy Indoor Air for America's Homes 406/994-3451—www.montana.edu/wwwcxair/

Notes