



SAFETY MATTERS

RISK MANAGEMENT NEWSLETTER

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CARBON MONOXIDE (CO) SAFETY

OBJECTIVE To learn how you can prevent carbon monoxide poisoning.

WHAT IS CARBON MONOXIDE?

Carbon monoxide, or "CO," is a poisonous, flammable gas that is colorless, odorless, tasteless, and slightly less dense than air and can kill you.

WHERE IS CO FOUND?

CO is found in fumes produced any time you burn fuel in cars or trucks, small engines, stoves, lanterns, grills, fireplaces, gas ranges, or furnaces. CO can build up indoors and poison people and animals who breathe it.

WHAT ARE THE SYMPTOMS OF CO POISONING?

The most common symptoms of CO poisoning are headache, dizziness, weakness, upset stomach, vomiting, chest pain, and confusion. CO symptoms are often described as "flu-like." If you breathe in a lot of CO, it can make you pass out or kill you. People who are sleeping or drunk can die from CO poisoning before they have symptoms.





WHO IS AT RISK FOR CO POISONING?

Everyone is at risk for CO poisoning. Infants, the elderly, people with chronic heart disease, anemia, or breathing problems are more likely to get sick from CO. Each year, more than 400 Americans die from unintentional CO poisoning not linked to fires, more than 20,000 visit the emergency room, and more than 4,000 are hospitalized.

WORKPLACE LOCATIONS WHERE EMPLOYEES COULD ENCOUNTER CO SOURCES

- Kitchen with a malfunctioning gas oven or range
- Gas-powered water heater in need of servicing
- An underground parking garage
- Air intake location on a loading dock
- A boiler room where ventilation is defective

WHAT TO DO IF THESE SYMPTOMS ARE FELT OR ALARM DETECTS CO

- Open windows and doors
- Turn off fuel-burning appliances/equipment
- Leave the building
- Seek immediate medical attention

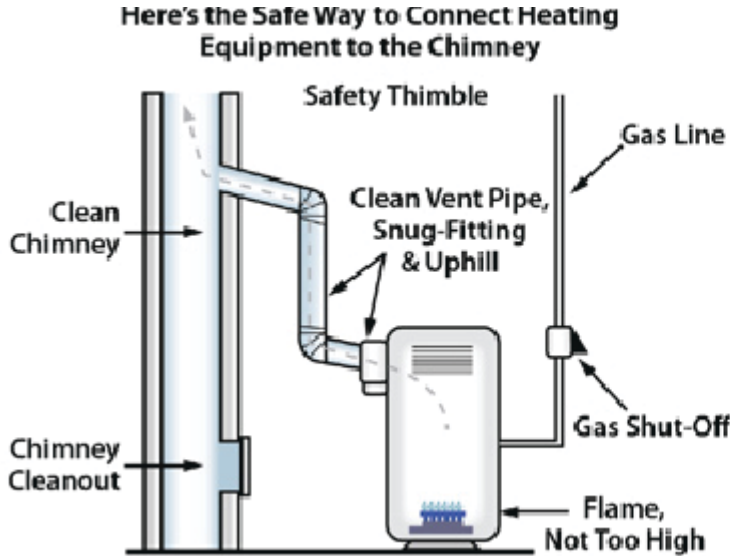
TIPS FOR PREVENTING CO POISONING

- Install American National Standards Institute (ANSI) and Underwriters Laboratories (UL) certified CO detectors near sleeping areas and potential sources.
- Check or replace the detector's battery when you change the time on your clocks each spring and fall.
- Consider buying a detector with a digital readout. This detector can tell you the highest level of CO concentration in an area in addition to alarming. Replace your CO detector every five years. Detectors are available for purchase at hardware stores.



- Have heating systems, water heaters, and any other gas, oil, or coal burning appliances/equipment serviced by a qualified technician every year.
- Do not use portable flameless chemical heaters indoors.
- When you buy gas equipment, buy only equipment carrying the seal of a national testing agency, such as Underwriters' Laboratories (UL).
- Make sure your gas appliances are vented properly. Horizontal vent pipes for appliances, such as a water heater, should go up slightly as they go toward outdoors, as shown in the image that follows. This prevents CO from leaking if the joints or pipes aren't fitted tightly.
- Have your chimney checked or cleaned every year. Chimneys can be blocked by debris. This can cause CO to build up inside your home or cabin.
- Never patch a vent pipe with tape, gum, or something else. This kind of patch can make CO build up in an enclosed space.
- Never use a gas range or oven for space heating. Using a gas range or oven for heating can cause a buildup of CO inside the enclosed space.
- Never burn charcoal indoors. Burning charcoal—red, gray, black, or white—gives off CO.
- Never use a portable gas stove indoors. Using a portable gas stove indoors can cause CO to build up inside the enclosed space.
- Never use a generator inside an enclosed space, or less than 20 feet from any window, door, or vent.
- When using a generator, use a battery-powered or battery backup CO detector.





NEVER use a generator indoors, in garages, or carports.



ONLY use outdoors and far from open windows, doors, and vents.

Illustration © Centers for Disease Control

TIPS FOR PREVENTING CO POISONING FROM YOUR VEHICLE?

- Have a mechanic check the exhaust system of your car or truck every year. A small leak in the exhaust system can lead to a buildup of CO inside the car.
- Never run your vehicle inside a garage that is attached to a house even with the garage door open or enclosed space. Always open the door to a detached garage to let in fresh air when you run a vehicle inside.
- If you drive a vehicle with a tailgate, when you open the tailgate open the vents or windows to make sure air is moving through. If only the tailgate is open, CO from the exhaust will be pulled into the vehicle.

If you have had a poisoning incident related to any generator, please report it at saferproducts.gov.

References/Resources

[Centers for Disease Control and Prevention's National Center for Environmental Health](#)

[U.S. Consumer Product Safety Commission - Practice Fire & Carbon Monoxide \(CO\) Safety During Cold Weather](#)

[U.S. Consumer Product Safety Commission - Carbon Monoxide \(CO\) The Invisible Killer](#)



This California Schools JPA fact sheet is not intended to be exhaustive. The discussion and best practices suggested herein should not be regarded as legal advice. Readers should pursue legal counsel or contact their insurance providers to gain more exhaustive advice.

