

# Carbon monoxide awareness

## Takeaways

- Carbon monoxide sources vary but can come from partial combustion of fuels or lack of adequate ventilation where fuels are used
- Symptoms include shortness of breath, nausea, dizziness, light-headedness, or headaches
- For anticipated CO poisoning, move the employee to fresh air and call 911

Carbon Monoxide (CO), often called the invisible killer, is an **odorless** and **colorless** gas created when fuels such as gasoline, wood, coal, natural gas, propane, oil, and methane burn incompletely. CO is often associated with the use of fuel-powered equipment that runs indoors without proper ventilation or scrubber systems on the equipment.

## Symptoms of CO Poisoning

CO enters the body through breathing. CO poisoning can be confused with flu symptoms, food poisoning, and other illnesses. Some symptoms include shortness of breath, nausea, dizziness, light-headedness or headaches. High levels of CO can be fatal, causing death within minutes. The concentration of CO, measured in parts per million (ppm) is a determining factor in the symptoms for an average, healthy adult.

## Occupational exposure limits:

**ACGIH TLV:** 25 ppm for an 8-hour time-weighted average (TWA)

**OSHA PEL:** 50 ppm for an 8-hour TWA

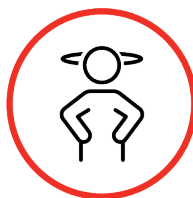
**NIOSH REL:** 35 ppm for an 8-hour TWA and a ceiling of 200 ppm

A person can be poisoned by a small amount of CO over a long period of time or by a large amount of CO over a short amount of time.

The dangers of CO exposure depend on several variables, including the person's health and activity level. Infants, pregnant women, and people with physical conditions that limit their body's ability to use oxygen (i.e. emphysema, asthma, heart disease) can be more severely affected by lower concentrations of CO than healthy adults would be. If CO poisoning is suspected, move the employee to fresh air and call 911.



Headache



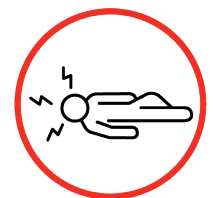
Dizziness



Nausea



Breathlessness



Unconscious

## Take action (Complete one or more activities as a team)

- GROUP DISCUSSION:** Are there potential sources of CO in your work area? Is everyone aware? Can you use a different fuel source to eliminate CO in the workplace?
- FIELD TRIP:** If there are potential sources of CO in your area, are there properly working CO alarms in the area? If not, are people wearing personal CO monitors that have been properly calibrated?
- VENTILATION REVIEW:** Take a look at fresh air supplies and mechanical ventilation near you. Are they turned on and working properly?

