

FACE Facts

SAFETY ALERT

Occupational Health Surveillance Program
Massachusetts Department of Public Health
November 2007



Carbon Monoxide Poisoning

From 2005 through 2006, six workers died as a result of carbon monoxide (CO) poisoning while at work in Massachusetts, including:

- In 2005, two tile installers, a 48-year-old male and a 52-year-old female, died from CO poisoning while installing tile in a home under construction; there was a gasoline-powered generator operating in the garage and a propane heater operating in the house.
- In 2006, a 54-year-old male mechanic died from CO poisoning while sitting in a box truck's cab with a gasoline-powered generator operating in the back of the truck.
- In 2006, a 43-year-old male finish carpenter died from CO poisoning while working inside a metal storage container with a gasoline-powered generator operating to power a light.
- In 2006, a 38-year-old male dock worker died from CO poisoning while using a gasoline-powered pressure washer to clean a freshwater tank on a fishing vessel.

As with most work-related fatalities, these deaths could have been prevented.

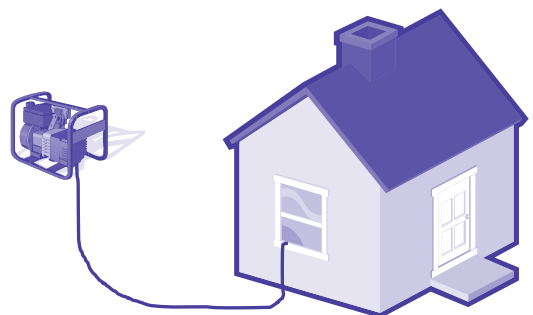
What is Carbon Monoxide?

Carbon monoxide (CO) is a poisonous, colorless, odorless and tasteless gas produced by burning fuel, such as gasoline, kerosene, oil, propane, coal or wood. When fuel-burning equipment, tools and appliances are used in enclosed places, or places without good ventilation, CO levels can build up quickly.

Carbon monoxide can build up quickly and overcome you in minutes without warning and cause unconsciousness and death.

Common sources of CO in the workplace are fuel-burning equipment, tools and appliances. Some examples are:

Forklifts	Concrete saws
Generators	Space heaters
Pressure washers	Compressors



Place fuel-burning equipment outdoors, away from open windows, doors and vents.

How to prevent CO poisoning in the workplace:

- Avoid using fuel-burning equipment indoors or in enclosed or partially-enclosed spaces, such as inside houses, garages, crawl spaces, basements, storage areas and tanks.
- Place fuel-burning equipment outdoors away from windows, doors or vents which could allow CO to enter and build up in the work area.
- Use tools powered by electricity, batteries, or compressed air when working indoors.
- If fuel-burning equipment must be used indoors, be sure to vent equipment exhaust outdoors and provide fresh air ventilation to the work area. Even with doors and windows open, CO levels from fuel-burning equipment can still reach dangerously high levels quickly.

In addition, employers should:

- Identify all potential sources of CO and locations where CO poisonings could occur.
- Provide training to workers in recognizing CO sources, as well as signs and symptoms of CO exposure.
- Install CO monitors with audible alarms in workplaces where fuel-burning appliances, tools, engines or generators are located and used. If it is not possible to have fixed CO monitors in a workplace, provide workers with personal CO monitors with audible alarms when working in areas where they may be exposed to CO.

More information on back

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What are the symptoms of CO poisoning?

Symptoms of CO poisoning are sometimes hard to recognize because they are similar to the flu (but without the fever). They include:

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| Tightness across the chest | Shortness of breath |
| Muscle weakness | Nausea |
| Headache | Dizziness |
| Loss of consciousness | Confusion |
| Fatigue | Vomiting |

CO poisoning can be reversed if caught in time. But even if you recover, CO poisoning may result in permanent damage to the parts of your body that require a lot of oxygen, such as the heart and brain.

What should you do if you suspect CO poisoning?

- Immediately get all exposed people and yourself to fresh air in an open area right away.
- Immediately seek medical attention by calling 9-1-1 or another local emergency number.
- Administer CPR (cardiopulmonary resuscitation) if exposed victims have stopped breathing.

**You can be exposed to fatal levels of CO in a rescue attempt.
DO NOT stay in the location with the victim if you suspect there may be high levels of CO!**

Health and Safety Resources

In Massachusetts:

Massachusetts Division of Occupational Safety

- Offers free consultation services to help employers improve their safety and health programs and train employees.
www.mass.gov/dos/consult

Massachusetts Department of Industrial Accidents

- Has grants available for providing workplace health and safety training to employers/employees in companies covered by the Massachusetts Workers' Compensation Insurance Law.
www.mass.gov/dia/Safety

Other Resources:

Centers for Disease Control and Prevention:

- Carbon Monoxide Poisoning Fact Sheet (available in 10 languages)
www.cdc.gov/co/faqs.htm

Environmental Protection Agency:

- Basic Information on Carbon Monoxide
www.epa.gov/iaq/co.html

The National Institute for Occupational Safety and Health

- Publication No. 96-118: Preventing Carbon Monoxide Poisoning from Small Gasoline-Powered Engines and Tools
www.cdc.gov/niosh/carbon2.html

Occupational Safety & Health Administration (OSHA)

- OSHA Fact Sheet: Carbon Monoxide Poisoning
www.osha.gov/OshDoc/data_General_Facts/carbonmonoxide-factsheet.pdf
- OSHA Quick Card: Carbon Monoxide Poisoning
www.osha.gov/OshDoc/data_Hurricane_Facts/carbon_monoxide.pdf

The Massachusetts Department of Public Health (MDPH), in cooperation with the National Institute for Occupational Safety and Health, conducts the project known as FACE (Fatality Assessment and Control Evaluation). FACE seeks to prevent occupational fatalities by identifying and investigating these incidents and then developing and disseminating prevention strategies to those who can intervene in the workplace.

This document is in the public domain and may be copied freely and can be found on the MDPH website at www.mass.gov/dph/face. Please share this document with others. If you have comments or questions, call the Massachusetts FACE project at 1-800-338-5223.

