

UK experts warn of increased risk of carbon monoxide poisoning

January 15 2014, by Mallory Powell

Wintry weather and extremely cold temperatures mean an increased chance of cases involving carbon monoxide poisoning in the workplace. When fuel-burning equipment or tools are used in buildings or in semi-enclosed spaces without ventilation, workers can become ill or die from carbon monoxide poisoning.

The Kentucky Injury Prevention and Research Center (KIPRC), housed at the University of Kentucky College of Public Health, and the Kentucky Labor Cabinet are partnering to warn employers and employees to take precautions. "Carbon monoxide is so dangerous because it doesn't have an odor or a taste," said Kentucky Labor Cabinet Secretary Larry Roberts. "It becomes an increased hazard when workplaces start shutting windows and doors to keep out the cold weather."

The hazard of [carbon monoxide](#) (CO) poisoning results from the incomplete burning of natural gas and any other material containing carbon, such as kerosene, oil, propane, wood, coal or gasoline. Carbon monoxide is found in combustion exhaust produced by cars and trucks, small gasoline engines, stoves, lanterns, and in gas ranges and heating systems. During winter months, the possibility of cases of [carbon monoxide poisoning](#) increases among workers due to the use of equipment in indoor spaces that are sealed to block out the cold and wind.

The Center for Disease Control and Prevention reports that each year in

the United States, carbon monoxide poisoning is responsible for approximately 450 unintentional deaths and more than 20,000 emergency department visits.

KIPRC reports that from 2008-2012, there were more than 1,130 visits to Kentucky emergency departments because of carbon monoxide poisoning, and at least 82 of those cases were work-related.

"Carbon monoxide can lead to sickness or even death in a matter of minutes," said Terry Bunn, director of KIPRC and associate professor in the Department of Preventive Medicine and Environmental Health in the UK College of Public Health. "The KIPRC is very glad to work with the Kentucky Labor Cabinet to warn people about the dangers of carbon monoxide poisoning. Everyone should be aware of the causes, risk factors and symptoms, and anyone who suspects carbon monoxide poisoning should seek immediate medical treatment."

Who is at risk?

- Workers most at risk include welders, garage mechanics, firefighters, diesel engine operators, forklift operators, toll booth or tunnel attendants, police officers and taxi drivers.
- Those who work in or around boiler rooms, breweries, warehouses, petroleum refineries, pulp and paper production, steel production, docks, blast furnaces or coke (beehive) ovens may be at risk of CO poisoning.

What is carbon monoxide?

- Carbon monoxide (CO) is a colorless, odorless, toxic gas which interferes with the oxygen-carrying capacity of blood.
- CO is non-irritating and can overcome persons without warning.

- Many cases of CO poisoning involve victims who were using gasoline powered tools and generators in buildings or semi-enclosed spaces without adequate ventilation.

What are the effects?

Severe carbon monoxide poisoning causes neurological damage, illness, coma and death.

What are the symptoms?

- Headaches, dizziness and drowsiness.
- Nausea, vomiting, tightness across the chest.

What should victims do if exposed?

- Victims who experience symptoms of CO poisoning need to get to fresh air right away.
- Seek immediate medical attention.

How can I prevent CO exposure?

- Never use a generator indoors or in enclosed or partially enclosed spaces such as garages, crawl spaces and basements. Opening windows and doors in an enclosed space may prevent CO buildup.
- Make sure the generator has 3-4 feet of clear space on all sides and above it to ensure adequate ventilation.
- Do not use a generator outdoors if placed near doors, windows or vents which could allow CO to enter and build up in occupied spaces.
- When using space heaters and stoves, ensure that they are in good

working order to reduce CO buildup, and never use in enclosed spaces or indoors.

- Consider using tools powered by electricity or compressed air, if available.

Provided by University of Kentucky

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