

How Employers Can Prevent Carbon Monoxide (CO) Poisoning at the Worksite

In June, 2014, twelve North Carolina manufacturing workers reported experiencing headaches, dizziness, blurred vision and nausea while on the job. They were being poisoned by a dangerous gas called carbon monoxide after a gas-powered tool was used indoors in a poorly ventilated area. Don't let this happen at your worksite!

Recognize the Signs:



Photo courtesy of Gas Safe Register (UK): GasSafeRegister.co.uk



Photo courtesy of The Center for Disease Control and Prevention: CDC

- Carbon monoxide (CO) is an odorless, colorless gas that can cause sudden illness and death.
- CO is a lethal poison that can quickly build up when combustible materials, such as gasoline, propane, diesel or wood are burned indoors.

Know Your CO Sources:

- Processing-related: production furnace
- Building-related: heating system or hot water heater
- Tool-related: tile cutters, fork-lifts, generators, floor buffers, and power washers
- Conduct a workplace survey to identify all actual or potential sources of CO (i.e.: equipment, processes, bulk storage)



Monitor CO Levels:

- Monitor employee CO exposure to determine worker exposure and the extent of the hazard.
- Use personal CO monitors where potential CO sources may exist. These monitors should be equipped with audible alarms to warn workers when CO concentrations are too high.
- CO testing or continuous monitoring is strongly recommended if there is any reason to question proper venting of indoor combustion sources.
- In North Carolina the permissible exposure limit for CO in general industry and construction is 50 parts per million (ppm) averaged over eight hours.
- The Immediately Dangerous to Life and Health (IDLH) level for CO is 1,200ppm at any given time, according to the National Institutes for Occupational Safety and Health (NIOSH).
- Best practice is to never allow CO levels to go above 150ppm within any area at any given time.



BEWARE!

CO is known as the silent killer!

Educate Workers:

- Educate workers about the sources, symptoms and work conditions that may result in CO poisoning.
- Train workers on methods to control CO exposure.

Ventilation:

- Increase ventilation that moves fresh air in, around and out of rooms. Ventilation is one of the most effective controls used to reduce CO exposure.

Modification of Existing Equipment or Processes:

- Upgrading existing processes or equipment may help control CO emissions in the workplace. Any changes should be examined carefully to ensure that other problems are not created.
- Isolating CO sources behind enclosed or separate spaces from workers (i.e.: barriers or walls) is the most common modification of existing processes.

Equipment Selection:

- Eliminating CO sources is the best way to prevent CO poisoning. Consider using electrically-powered equipment instead of gasoline or propane-powered equipment.
- Ensure equipment producing CO are controlling emissions as much as possible (i.e.: provide venting points connected to local exhaust ventilation systems).

Maintain Equipment:

- Ensure equipment and appliances that can produce CO are in good working order.

Training is an on-going process of continued updating and re-evaluation.
This is necessary to ensure continued success of the CO control program.

Need More Information?

919-707-5900

Occupational and Environmental Epidemiology Branch

N.C. Department of Health and Human Services - Division of Public Health

www.ncdhhs.gov - www.publichealth.nc.gov



Adapted from:

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