

Carbon Monoxide Prevention

One step closer to a safer school

Lines of Business: General Liability, Public Officials Liability, Educators Legal Liability

Risk Control Strategy/Key Issues: To provide education professionals with the elements to provide a safe and secure learning environment

Introduction

Every year, accidental exposure to carbon monoxide (CO) sends thousands of people to the emergency rooms across the country and hundreds of people die from it. These accidents happen everywhere including in our schools. They could be prevented if the schools were equipped with CO alarms; however few schools are equipped with them. Currently, only two states, Connecticut and Maryland, require CO alarms in their schools. Recently, Pennsylvania began work on a regulation that would require CO alarms in all schools.

Since 2007 there have been roughly 19 CO-related incidents at schools, causing more than 350 children and staff being hospitalized and thousands of students evacuated from schools. Carbon Monoxide is often called the “silent killer”, as it is odorless, tasteless and a colorless gas, produced by incomplete combustion in fuel-burning devices such as furnaces. Prolonged exposure to CO can be fatal.

Suggested Policy Elements:

- Superintendents and facilities directors should seek guidance regarding what type of Carbon Monoxide detectors to purchase, as well as the installation method and location of CO detectors from their local building inspectors or Fire Marshal.
- CO alarms, where possible, should be both battery backup and operate on normal 110 volt AC electrical power. If not feasible they can be one or the other. Both types meet Underwriter's Laboratory (UL) listings.
- Schools should review available safety resources and develop safety training for their staff and students, in the event of a CO alarm actuation.
- Assign responsibility and accountability for the checking and maintenance of the CO detectors. At a minimum any batteries should be changed every six (6) months.

Symptoms of CO poisoning: Because CO is colorless, odorless, and otherwise undetectable to the human senses; people may not know that they are being exposed. The initial symptoms of low to moderate CO poisoning are similar to the flu (but without a fever). They are:

- Headache
- Fatigue
- Shortness of breath
- Nausea
- Dizziness

High level CO poisoning results in progressively more severe symptoms, such as: Mental confusion, Vomiting, Loss of muscular coordination, Loss of consciousness, and ultimately death.

Carbon Monoxide Prevention Steps:

- Install carbon monoxide detectors at combustion sources, such as boilers, furnaces, stoves and water heaters.
- Have a licensed professional inspect the heating systems annually.
- Check all carbon monoxide alarms every six months: Do they need new batteries?
- Learn the different sounds the carbon monoxide alarm makes for end of life warning, to the low battery chirp to the detection of carbon monoxide.
- Remember that carbon monoxide prevention is only one step to a safer school.
- Do not block or seal shut the exhaust flues or ducts used by water heaters.
- Do not store anything within four feet of the school's furnace or boiler. Both require large amounts of fresh air for complete combustion.

What to do if the CO alarm goes off

- Never ignore a CO alarm sounding - it is a warning of a potential deadly hazard.
- Open doors and windows for ventilation.
- Move outside immediately to fresh air.
- Call 911, take head count making sure all are out of the school building. DO NOT reenter the school until advised to do so by the responding authorities.

Web Links:

- National Conference of State Legislatures
<http://www.ncsl.org/issues-research/env-res/carbon-monoxide-detectors-state-statutes.aspx>
- CarbonMonoxideAlarm.info
<http://www.carbonmonoxidealarm.info/CO-Alarm-Campaign-for-Schools.html>
- National Fire Protection Association
http://www.nfpa.org/standard_items/search_results?searchStr=carbon%20monoxide

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