

# UTAH OSHA SAFETY LINE

NEWSLETTER



EDITOR | Jerry Parkstone

## Carbon Monoxide Exposures in the Workplace

As the temperatures drop, the possibility of exposure to Carbon Monoxide increases. We no longer work with doors and windows open, we start using portable heaters, and we are working indoors more than we do during the summer months. Every year we hear of workers who have been exposed to carbon monoxide in the workplace, and unfortunately we have fatalities associated with carbon monoxide poisoning. Because of the hazards associated with carbon monoxide, it is important to be knowledgeable on the characteristics, risks, and what to do if you or a worker is exposed to carbon monoxide.

### What is carbon monoxide?

Carbon monoxide (CO) is a poisonous, colorless, odorless, and tasteless gas. Although it has no detectable odor, CO is often mixed with other gases that do have an odor. So, you can inhale carbon monoxide right along with gases that you can smell and not even know that CO is present.

CO is a common industrial hazard resulting from the incomplete burning of natural gas and any other material containing carbon such as gasoline, kerosene, oil, propane, coal, or wood. Forges, blast furnaces and coke ovens produce CO, but one of the most common sources of exposure in the workplace is the internal combustion engine.

### How does CO harm you?

Carbon monoxide is harmful when breathed because it displaces oxygen in the blood and deprives the heart, brain, and other vital organs of oxygen. Large amounts of CO can overcome you in minutes with-

out warning—causing you to lose consciousness and suffocate. Besides tightness across the chest, initial symptoms of CO poisoning may include headache, fatigue, dizziness, drowsiness, or nausea. Sudden chest pain may occur in people with angina. During prolonged or high exposures, symptoms may worsen and include vomiting, confusion, and collapse in addition to loss of consciousness and muscle weakness. Symptoms vary widely from person to person. CO poisoning may occur sooner in those most susceptible: young children, elderly people, people with lung or heart disease, people at high altitudes, or those who already have elevated CO blood levels, such as smokers. Also, CO poisoning poses a special risk to fetuses.

## In This Issue

CO Hazards

2012 Workplace Fatalities

Take Safety Home

Compliance Corner

Continued on next page

Continued from previous page



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

### **Who is at risk?**

You may be exposed to harmful levels of CO in boiler rooms, breweries, warehouses, petroleum refineries, pulp and paper production, and steel production; around docks, blast furnaces, or coke ovens; or in one of the following occupations; Welder, Garage mechanic, Firefighter, Carbon-black maker, Organic chemical, Synthesizer, Metal oxide reducer, Diesel engine operator, Forklift operator, Customs inspector, Police officer, Taxi driver.

### **What can you do if you suspect someone has been poisoned?**

- ◆ When you suspect CO poisoning, promptly taking the following actions can save lives:
- ◆ Move the victim immediately to fresh air in an open area
- ◆ Call 911 or another local emergency number for medical attention or assistance
- ◆ Administer 100-percent oxygen using a tight-fitting mask if the victim is breathing
- ◆ Administer cardiopulmonary resuscitation if the victim has stopped breathing

Warning: You may be exposed to fatal levels of CO poisoning in a rescue attempt. Rescuers should be skilled at performing recovery operations and using recovery equipment. Employers should make sure those rescuers are not exposed to dangerous CO levels when performing rescue operations.

### **How can employers help prevent CO poisoning?**

To reduce the chances of CO poisoning in your workplace, you should take the following actions:

- ◆ Install an effective ventilation system that will remove CO from work areas
- ◆ Maintain equipment and appliances (water heaters, space heaters, cooking ranges, etc.) that can produce CO in good working order to promote their safe operation and to reduce CO formation
- ◆ Consider switching from gasoline-powered engines or tools in poorly ventilated areas
- ◆ Provide personal CO monitors with audible alarms if potential exposure to CO exists
- ◆ Test air regularly in areas where CO may be present, including confined spaces
- ◆ Install CO monitors with audible alarms
- ◆ Use a full-facepiece pressure-demand self-contained breathing apparatus certified by the National Institute for Occupational Safety and Health (NIOSH), or a combination full-facepiece pressure demand supplied-air respirator with auxiliary self-contained air supply in areas with high CO concentrations
- ◆ Use respirators with appropriate canisters for short periods under certain circumstances where CO levels are not exceedingly high
- ◆ Educate workers about the sources and conditions that may result in CO poisoning as well as the symptoms and control of CO exposure

### **What can employees do to help prevent CO poisoning?**

- ◆ Report any situation to your employer that might cause CO to accumulate

Continued on next page

Continued from previous page



- ◆ Be alert to ventilation problems – especially in enclosed areas where gases of burning fuels may be released
- ◆ Report promptly complaints of dizziness, drowsiness, or nausea
- ◆ Avoid overexertion if you suspect CO poisoning and leave the contaminated area
- ◆ Tell your doctor that you have been exposed to CO if you get sick
- ◆ Avoid the use of gas-powered engines, such as those in powered washers as well as heaters and forklifts, while working in enclosed spaces

## Utah Workplace Fatalities in 2012

The Utah Labor Commission Bureau of Labor Statics released their preliminary count of work-related fatalities in the State of Utah for the year 2012. 39 work-related fatalities occurred in the State or Utah, the same number as 2011.

The four major causes of work-related fatalities were:

- ◆ Transportation Incidents (41%)
- ◆ Contact with objects and equipment (18%)
- ◆ Assaults and Violent Acts (18%)
- ◆ Slips, Trips, and Falls (10%)

The demographics associated with these fatalities were:

- ◆ 34 were men
- ◆ 30 were white (non-Hispanic)
- ◆ 9 were self employed
- ◆ 33% were between the ages of 45-54
- ◆ 28% were between the ages of 25-34

A preliminary total of 4,383 fatal work injuries were recorded in the United States in 2012, down from a revised count of 4,693 fatal work injuries in 2011, according to results from the Census of Fatal Occupational Injuries (CFOI) conducted by the U.S. Bureau of Labor Statistics. The 2012 total represents the second lowest preliminary total since CFOI was first conducted in 1992. The rate of fatal work injury for U.S. workers in 2012 was 3.2 per 100,000 full-time equivalent (FTE) workers, down from a rate of 3.5 per 100,000 in 2011.

### Take Safety Home with You

Every work day we are asked to follow safety rules by our employers, but do you follow similar safety rules once you return home? We should not put safety to the back of our minds when we are performing everyday tasks like mowing the lawn, painting, home repairs, tilling the garden, putting up our Halloween decorations. Have you read the owner's manuals for your lawn mower, circular saw, leaf blowers, etc.? Do your children perform tasks using this equipment, and if so, have they read the manual? Do they know how to safely remove a jam or obstruction? We know that a sharp blade on a kitchen knife is safer than a dull blade, but when was the last time you sharpened the blades on your lawn mower?

Continued on next page

Continued from previous page



As fall rapidly approaches, now is an excellent time to do a safety assessment of your living space. Check your electrical boxes, covers, switches. Is your fire extinguisher up to date? Are your smoke detectors fully functioning? Have you had your furnace and water heater inspected or cleaned? These simple checks can save you and your family from possible injuries, or even death.

## Compliance Corner

**Question:** I have heard that employers are responsible for providing required PPE to employees. The company I work for said that I was responsible to provide my own flame resistant clothing for the jobsite. They did give me a shirt, but told me that I would have to purchase a coat and pants. Can you please tell me the laws on this and where I might find it? Thanks!

**Answer:** An employer is responsible for assessing the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE) if such hazards are present, the employer shall provide the appropriate PPE to their employees.

29 CFR 1910.132(h)(1) states that the PPE, ***shall be provided by the employer at no cost to employees***. There are some exceptions to this rule such as: 29 CFR 1910.132(h)(4)(ii) which states that the employer is not required to pay for: ***Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots.....***

It appears that your employer has completed an assessment and has determined that you require flame resistant clothing, which is not everyday clothing. Your employer is responsible to pay for any flame resistant clothing that is required.

**Question:** In the following OSHA sections 1910.23(e)(5)(i), 1910.23(e)(3)(v)(a) and 1910.23(e)(i) it mentions "smooth-surfaced" handrails. Would the heads of bolts and/or fasteners sticking up through the top of the handrail be considered unacceptable with regards to the handrail being smooth? Also, what other conditions might be considered unacceptable? Section 1926.1052(c)(8) also factors in with regards to injury of employees. The environment in question is industrial. Pictures can be provided if needed.

**Answer:** Usually smooth means just that, no screws or anything protruding. The idea is that if one were to lose balance, one could just grab the railing and not suffer any injury from the rail. You have referenced three general industry standards (29 CFR 1910) and one construction standard (29 CFR 1926). These would not be applicable at the same work site, i.e., general industry would usually be a fixed location business with permanent stairs and railings while construction would be temporary or permanent stairs before they are released to the