

SAFETY MEETING TOPIC: Carbon Monoxide Poisoning

It's called the "silent sickness," and sometimes it becomes a "silent killer. Carbon monoxide (CO) is a common, highly flammable gas that can kill in minutes, in high concentrations. Unlike many other chemicals, carbon monoxide has no distinctive odor, taste, or appearance. Unfortunately, the symptoms of CO poisoning-nausea, headache, and dizziness-resemble other common illnesses, and can be easily mistaken for a cold or stomach flu.

How It Poisons: This gas produces its toxic effects when you breathe it, by replacing oxygen in the blood stream with carbon monoxide which acts on all organs in the body, especially the brain. As carbon monoxide combines with hemoglobin, less and less oxygen is carried to the tissues. Unconsciousness usually occurs when about half the hemoglobin is saturated with CO.

How It's Produced: Any process that involves the use of heat, oxidation, or combustion can produce carbon monoxide. Winter months can be a dangerous time for this problem. Buildings are tightly closed, and the buildup of the gas is not usually noticed by unsuspecting employees. This dangerous gas can be a problem in buildings, repair shops, and temporary weather enclosures as well as car and truck cabs if exhaust systems are malfunctioning or leaking.

High Exposure Areas: The gasoline engines used around shipping docks are known carbon monoxide producers. Diesel engines are next in level of danger, followed by propane-powered forklift trucks. Employees must be particularly careful if forklifts are left running inside a truck or trailer body; hazardous CO concentrations can build up very quickly. Watch outside delivery truck drivers too as they are frequently reluctant to shut off truck engines while unloading.

High exposures may occur in forklift or vehicle repair shops. Offices above loading docks are also vulnerable as the gas rises, causing dizziness and nausea for employees working there. In shop areas, ventilation systems should be checked periodically to prevent poisoning from this gas. Fans should be on, motors and fan belts functioning properly. Hoses and duct work should be carefully connected and the systems checked for dents and holes which could impede the exhaust of gasses. Engines should be turned off as much as possible when buildings are tightly sealed during the winter.

Symptoms of CO Exposure: Symptoms to be alert for include red eyes, weakness, dizziness, headaches, and nausea. If you notice a pattern to these symptoms when engines are running in the area, carbon monoxide could be the cause. Forklifts, whether diesel, propane, or gasoline powered are significant CO producers, especially when left idling. Immediately remove anyone who is overcome from the CO exposure area. Restore breathing through CPR. Keep the person warm and resting until paramedics arrive.

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