Carbon Monoxide

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Carbon monoxide (also known as CO) is one of the most dangerous and common industrial hazards. This poisonous gas kills outright without warning. It also causes brain damage, heart and breathing problems and other illnesses and injuries.

Where Does It Come From?

The main source of carbon monoxide is incomplete burning of anything that contains carbon. This includes gasoline, natural gas, oil, propane, coal or wood.

At work, the most common source of CO exposure is the internal combustion engine, such as that used in motor vehicles. Other sources include heat furnaces, forges, blast furnaces, coke ovens and kilns.

At home, a poorly adjusted or defective fuel furnace can cause carbon monoxide to form and

accumulate in the house through leaking flues, vents and chimneys. Hot water heaters, clothes dryers and space heaters fueled by natural gas or propane also can generate carbon monoxide. Maintaining adequate ventilation, using devices correctly and installing a carbon monoxide detector are three ways you can prevent poisoning.

Motor vehicles – both moving and stationary – are the main cause of all carbon monoxide deaths. More than one-third of deaths from carbon monoxide poisoning involving motor vehicles occur during the winter, often in garages.

What Does It Do to You?

Carbon monoxide – which gives no warning of its presence because it's colorless, odorless and tasteless– poisons by displacing oxygen in the blood. After it's inhaled, CO combines 200 times faster with the blood's oxygen carrier, hemoglobin, than oxygen does.

Large amounts of CO can kill a person within minutes, even if there is plenty of oxygen available in the air.

At lower levels, carbon monoxide causes headaches, tightness across the chest, fatigue, nausea and drowsiness. With symptoms such as these, carbon monoxide poisoning is often mistaken for an illness such as the flu. A worker with mild CO poisoning is prone to injury and errors because of being drowsy and inattentive.

Increased exposure interferes with physical coordination and mental alertness. Convulsions, coma and death follow. Even if a victim survives a serious exposure, he or she may have permanent damage to body tissue, particularly of the brain and the heart.

Who Is At Risk?

At risk for carbon monoxide poisoning are workers in settings such as these: foundries, ice arenas, tunnels, toll booths, warehouses, loading docks, motor vehicle repair shops, breweries and bakeries.

Conclusion

If carbon monoxide is a potential hazard in your workplace, you should be protected by an alarm that will sound and flash if CO is accumulating. Some jobs will require you to wear a personal monitor. Learn how these systems work for you and heed the warnings. And be sure to install a detector in your home, too.