Summary Statistics

Place of Carbon Monoxide Poisoning

Background

Carbon monoxide (CO) poisoning is a reportable condition under Michigan’s Public Health Code. The main sources of reports for CO poisoning are the Michigan Poison Control Center, hospitals and emergency departments.

CO Exposure Sources, Michigan 2014

Number of Individuals based on reports of 632 unintentional CO poisoning*

CO Source

*Exposure data missing for 177 individuals
MI OSHA Follow Up of Elevated Carbon Monoxide Exposure

✓ Following two employees seeking medical treatment for CO poisoning, a prepared meat manufacturer was cited for CO air contaminants in excess of both the exposure limit ceiling value of 200 ppm for a five-minute average and the 8 hour time weighted average (TWA) permissible exposure limit of 35 ppm during the indoor operation of a gasoline-fueled power washer to clean meat cutting equipment and facilities.

✓ Following the report of a propane powered forklift driver with a carboxyhemoglobin (COHb) of 11.5% who did not smoke cigarettes, a machinery manufacturer was cited for CO levels in excess of the exposure limit ceiling value of 200 ppm for a five-minute average, insufficient general ventilation, an inadequate hazard communication program, an inadequate hearing conservation program and inadequate guarding of grinding machinery.

✓ Following the report of 12 workers with elevated COHb levels from 13.1-24.5%, a malfunctioning forklift was identified at a food processing facility.

Elevated Work-Related Carbon Monoxide Poisoning Narratives

Since 2001, 13 workers have died in Michigan from carbon monoxide exposure. Common sources of CO in the work place include generators, pressure washers, propane-powered forklifts, propane space heaters and compressors.

Examples of fatalities due to CO exposure:
✓ 70 year old church security guard died from CO poisoning from an indoor generator.
✓ 45 year old farmer died from CO poisoning in a barn from repairing a tractor while the engine was running.
✓ 47 year old painter spraying water-based latex paint died from CO poisoning in a manufacturing plant from a propane powered forklift.
✓ 30 year old painter died from CO poisoning while using a portable generator.

Examples of non-fatal work-related CO exposures:
✓ A non-smoking male in his 20’s presented to an Emergency Department (ED) complained of lightheadedness and nausea, and loss of consciousness. He was exposed to CO at work from a generator. His COHb level was 26.6%. The normal COHb level in non-smokers is <1.5%.
✓ A non-smoking female in her 20’s had acute onset of headache and nausea after a CO detector went off at work. Her COHb level was 5.9%.
✓ A smoking female in her 20’s developed dizziness, nausea, and vomiting after working with a gas motorized concrete smoother. Her COHb level was 18.8%. The average COHb level in smokers is around 4%.

1 Hemoglobin in blood that has carbon monoxide instead of the normal oxygen bound to it.