

Environmental Issues in Childcare Settings: Carbon Monoxide



Childcare providers are in a unique position to observe children for many hours in a daily setting and can serve as a first alert in noticing signs and symptoms of ongoing illness or health conditions caused by environmental contaminants in a child's living/play space.

What is Carbon Monoxide (CO) Poisoning?

Carbon monoxide (CO) poisoning is when too much CO, an invisible, odorless gas, builds up in a person's blood. This can cause suffocation because CO stops oxygen from moving through your body. CO comes from fossil fuel-burning appliances, equipment, and vehicles. In Pennsylvania, CO poisoning brings thousands of people to hospital emergency rooms each year.

CO poisoning can be difficult to detect. In the Fall of 2022, a childcare center in Pennsylvania identified an unconscious child and called 911. Emergency responders found dangerously high levels of CO in the building. Because CO can't be seen or smelled, childcare workers were not aware of the CO leak from a faulty furnace, until they saw a child had lost consciousness.

What are Common Sources of CO in Childcare Settings?

Auto exhaust, generators 	Tobacco smoke, grills 	Gas or oil furnaces, gas space heaters, fireplaces 	Gas stoves, water heaters, dryers 	Gas heaters in pools, spas, and campers
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Would You Recognize the Signs of a Child Exposed to Carbon Monoxide?

Children with CO poisoning often have headaches, dizziness, weakness, and nausea. With CO exposure, these symptoms appear without a fever or other signs of a cold or illness.

More Common Complaints	Less Common Complaints	CO Poisoning Can Lead To...
Headache, dizziness, weakness, clumsiness, nausea, vomiting 	Rapid or irregular heartbeat, shortness of breath, chest pain, hearing loss, blurry vision, confusion, disorientation	Seizures, loss of consciousness, heart attack, death

Adapted from CDC Clinical Guidance for Carbon Monoxide Poisoning
https://www.cdc.gov/disasters/co_guidance.html

What Can You Do?

- ✓ Install and maintain CO detectors on each floor of your facility. Additional detectors should be placed in the area of fuel-burning appliances. Replace your CO detector every 5 years.
- ✓ Be sure that heat sources or appliances are properly vented at your childcare facility. Children playing outdoors should stay away from machinery or equipment that uses fuel or produces exhaust (e.g., generators, grills, propane heaters, vehicles, gas-powered tools).
- ✓ If the CO detector sounds a warning, evacuate immediately and call 911.

For More Information

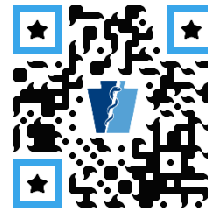
Mayo Clinic
CO Information



CDC CO Information



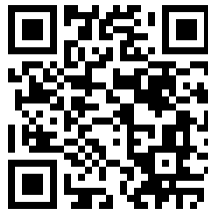
PA DOH
CO Information



Spanish



Office of the State Fire
Commissioner



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health.pa.gov/topics/envirohealth