

Carbon Monoxide

Carbon monoxide is a deadly poison.

Carbon monoxide (CO) is a colorless, odorless gas produced whenever carbon burns. When breathed, CO takes oxygen from the bloodstream. Oxygen-deprivation is damaging to vital organs and often fatal. CO can build up enough in an enclosed space to kill a person within minutes. Victims of CO poisoning can survive if the symptoms are recognized early and immediate action is taken. If not detected promptly, irreversible damage can occur to the heart or brain; death is not an unlikely outcome if CO poisoning is not dealt with and treated promptly.



In order to protect yourself and others from poisoning, learn the risks for CO buildup and take preventative measures.

Sources of CO:

Substances containing carbon give off CO when burned, such as:

- Gasoline
- Natural gas
- Oil
- Propane
- Coal
- Wood

A common source for CO is the exhaust of an internal combustion engine. Other sources that can generate CO include generators, stoves and lanterns. Workers who use gas-powered tools are at risk.

Symptoms of poisoning: High levels of CO inhalation can cause loss of consciousness and death. Unless suspected, CO poisoning can be difficult to diagnose because the symptoms mimic symptoms of other illnesses.

- Dizziness
- Headache
- Drowsiness
- Nausea or vomiting
- Weakness
- Confusion and paranoia
- Difficulty breathing
- Collapse

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Preventative measures:

- Check your workplace and home for CO sources and potential sources.
- Monitor the air.
 - Conduct regular tests.
 - Use personal CO monitors when CO is a risk. These must be equipped with an alarm to warn when CO levels have risen too high.
 - Levels must stay at or below 50 parts per million.
- Educate workers about CO poisoning. They should be alert for symptoms and know to immediately report them. They should also know the common sources, and the safe use of any CO-producing equipment.
- **Do not operate internal combustion engines indoors.** For example, do not leave your car running in a garage.
- If internal combustion engines are required indoors due to an emergency situation, everyone indoors must wear respirators.
- If you need to use a fuel-burning tool indoors:
 - Use equipment that can separate the CO producing unit from the tool. Put the engine outdoors, away from any sources of ventilation into the building, and use the exhaust-free part of the tool indoors.
 - If it is possible and safe for the task, substitute electric-powered tools for gas-powered tools.
- Ventilate the area. This requires more than simply opening windows or using a fan. Ventilation should be professionally installed.
- Any equipment producing CO should be well maintained.

If poisoning is suspected:

- Turn off the equipment.
- Move the affected people into fresh air.
- Keep them warm.
- Call 911.
- If they are not breathing, administer cardiopulmonary resuscitation (CPR).
- No one with symptoms of CO poisoning should drive.
- If CO poisoning occurs inside a building, have the CO levels checked before anyone returns.
- Rescuers may be exposed to fatal levels of CO, and should be fully trained and prepared for the situation.

