

Carbon monoxide is a tasteless, colorless, odorless gas found in the fumes of fuels that contain carbon, such as wood, coal and gasoline. Carbon monoxide poisoning is a potentially fatal illness that occurs when people breathe in carbon monoxide.

All sorts of sources can release carbon monoxide, including cars, trucks, small gasoline engines (like lawnmowers), stoves, lanterns, furnaces, grills, gas ranges, water heaters and clothes dryers. The risk of poisoning is especially high when equipment is used in an enclosed place and ventilation is poor. Carbon monoxide poisoning can occur in victims of smoke inhalation during a fire. More than one-third of carbon monoxide-related deaths occur when the victim is asleep.

Once inhaled, carbon monoxide passes from your lungs into your bloodstream, where it attaches to the hemoglobin molecules that normally carry oxygen. Oxygen can't travel on a hemoglobin molecule that already has carbon monoxide attached to it. As exposure continues, the gas hijacks more and more hemoglobin molecules, and the blood gradually loses its ability to carry enough oxygen to meet your body's needs. Without enough oxygen, individual cells suffocate and die, especially in vital organs such as the brain and heart. Carbon monoxide also can act directly as a poison, interfering with cells' internal chemical reactions.

# Symptoms

Symptoms vary depending on the concentration of carbon monoxide in the environment, the length of time you are exposed, and your health. If you are exposed to very high levels of carbon monoxide gas in a poorly ventilated room, you can develop:

- Headache
- Shortness of breath
- Personality changes
- Unusually emotional behavior or extreme swings in emotions
- Fatigue
- Malaise (a generally sick feeling)
- Dizziness
- Clumsiness or difficulty walking
- Vision problems
- Confusion and impaired judgment
- Nausea and vomiting
- Rapid breathing
- Chest pain
- A rapid or irregular heartbeat

Without immediate treatment, you can lose consciousness, have a seizure, enter a coma, and potentially die. Death can result from only a few minutes of exposure to higher concentrations or from an hour of exposure to lower levels.

If you are exposed to very low levels of carbon monoxide over a longer period (weeks or months), your symptoms can appear like the flu, with headache, fatigue, malaise (a general sick feeling) and sometimes nausea and vomiting. People with long-term exposure to low levels of carbon monoxide also can have numbness, unexplained vision problems, sleep disturbances, and impaired memory and concentration.