



Carbon Monoxide Poisoning

Carbon monoxide (CO) poisoning occurs when carbon monoxide gas is inhaled. CO is a colorless, odorless, highly poisonous gas that is produced by incomplete combustion. It is found in automobile exhaust fumes, faulty stoves and heating systems, fires, and cigarette smoke. Other sources include wood-burning stoves, kerosene heaters, improperly ventilated water heaters and gas stoves, and blocked or poorly maintained chimney flues. CO interferes with the ability of the blood to carry oxygen. The result is headache, nausea, convulsions, and finally death by asphyxiation.

Carbon monoxide, sometimes called coal gas, has been known as a toxic substance since the third century B.C. Today, it is the leading cause of accidental poisoning in the United States. According to the *Journal of the American Medical Association*, 2,000 Americans die each year from accidental exposure to CO. An additional 10,000 people seek medical attention after exposure to CO. The Consumer Products Safety Commission reported in 2004 that about 64% of unintentional CO poisoning deaths occur in the home.

Symptoms of CO poisoning (in order of increasing severity)

- Headache
- Shortness of breath
- Dizziness
- Fatigue
- Mental confusion and difficulty thinking
- Loss of fine hand-eye coordination
- Nausea and vomiting
- Rapid heart rate
- Hallucinations
- Inability to execute voluntary movements accurately
- Collapse
- Lowered body temperature (hypothermia)
- Coma
- Convulsions
- Seriously low blood pressure
- Cardiac and respiratory failure
- Death

Prevention

- Install a carbon monoxide detector that sounds a warning similar to a smoke detector (most are available for less than \$50).
- Hire a qualified contractor to install heating systems and appliances.
- Stop smoking. Smokers have less tolerance to environmental CO.
- Inspect and properly maintain heating systems, chimneys, and appliances.
- Do not use a gas stove to heat a home.
- Make sure there is proper ventilation if using a kerosene heater indoors.
- Do not leave vehicles running inside the garage.
- Keep car windows rolled up when stuck in heavy traffic, especially if inside a tunnel.

Immediate treatment for CO poisoning is to remove the victim from the source of carbon monoxide gas and to get that person into fresh air. If the victim is not breathing and has no pulse, cardiopulmonary resuscitation (CPR) should be started. Depending on the severity of the poisoning, 100% oxygen may be given with a tight-fitting mask as soon as it is available.