

Carbon Monoxide: The Silent Killer

Carbon monoxide, known by the chemical symbol CO, is a colorless, practically odorless gas. CO is poisonous to humans and animals because it displaces oxygen in the blood stream. According to the Consumer Products Safety Commission, every year over 200 people in the United States die from CO produced by fuel burning appliances like furnaces, water heaters and room heaters in the home. Still more are killed by burning charcoal in the house or in a tent, and others die by leaving their car running in attached garages.

Carbon monoxide is produced by the incomplete combustion of carbon or a carbonaceous material, such as gasoline and natural gas. Some producers of carbon monoxide (CO) are industrial processes, heating equipment, accidental fire, cigarettes and the internal combustion engine. Generators, candles, and space heaters can all create CO emissions.

Carbon monoxide affects people differently depending on the concentration and duration that people breathe CO, as well as the person's general health. The initial symptoms of CO poisoning are like the flu. They include headache, fatigue, shortness of breath, nausea and dizziness. Many people with CO poisoning mistake their symptoms for the flu or are misdiagnosed by a doctor. Higher concentrations of CO in the blood stream can lead to impaired vision, lack of coordination, dizziness, confusion and nausea.

There are many standards for CO exposure limits. The OSHA standard is 50 parts per million (PPM) in the air as a maximum exposure in the workplace. One PPM is defined as one CO molecule in one million molecules of air. The American Society of Heating, Refrigeration and Air Conditioning Engineers list the maximum allowable short term limit at 9ppm. The EPA has two national health standards for carbon monoxide; the one hour standard of 35ppm and an eight hour standard of 9ppm.

Everyone is strongly encouraged to install CO detectors/alarms in their homes. Make sure you purchase a CO detector/alarm that is listed with the Underwriters Laboratories (UL) standard 2034. Follow the manufactures' guidelines for installation. In general you want to place the detector in a hallway near every separate sleeping area. Do not allow furniture or draperies to cover the detector, and avoid installing the detector in corners where air does not circulate.

The majority of off-the-shelf home CO detectors are designed to alarm at 100 PPM and above, to satisfy current laws concerning home CO alarms. A few home CO

meters have digital readouts to show lower levels but they will not alarm at these lower levels.

If you think you are experiencing any symptoms of carbon monoxide poisoning get fresh air immediately. You should open doors and windows for ventilation, turn off any combustion appliances and leave the house. You can then call the fire department and report your symptoms. Prompt medical attention is important if you feel the symptoms of CO poisoning. Make sure you notify your doctor that you suspect that CO poisoning is causing your symptoms. Prior to turning the fuel burning appliances back on, have them inspected for malfunction by a licensed and insured service person.

Prevention of carbon monoxide poisoning is key to your safety. Make sure all gas fired appliances are installed to manufactures instructions and local building codes. Have your home's heating system inspected and serviced regularly. Make sure the fireplace chimney flue is open during use and never burn charcoal inside your house or garage. Do not use gas appliances like ranges, dryers or ovens to heat your home.

Protect yourself and your family, get a carbon monoxide detector and understand the effects of CO on your health.