CO Poisoning at Home:

CO poisoning can also occur in your home. To reduce your risks:

- Recognize potential sources of CO in your home, such as portable gas heaters, gas furnaces, charcoal grills, gas ranges and ovens, gas water heaters, fireplaces, and idling cars in the garage.

- Make sure appliances are installed and operated according to manufacturer's recommendations and local building codes.
- Be aware of signs of improper appliance operations such as: decreased hot water supply, furnace unable to heat home or running more than usual, sooting, especially on appliances, or an unfamiliar or burning odor.
- Examine vents and chimneys routinely for rust, sooting, water stains or loose connections and masonry.
- Have the heating system inspected and serviced annually, preferable before the onset of cold weather. Service other appliances according to manufacturer's recommendations. Never service appliances without proper knowledge and training.

- Never idle a car in the garage.
- Never use a gas range or oven to heat a home or burn charcoal indoors.
- Install and maintain CO detectors with audible alarms.

CO Detectors

CO detectors, which function much like smoke detectors, sense dangerous levels of carbon monoxide and will alert you with an alarm. Most manufacturers recommend that you place one detector in the garage and another in the house, so you will always know if there's an increase in the levels of carbon monoxide in the air you breath.

Getting Assistance

If you have any questions about CO poisoning or would like to arrange for monitoring in your work area, contact EH&S.

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Environmental Health & Safety

Carbon Monoxide Poisoning

A Silent Killer

Carbon Monoxide Poisoning

Carbon monoxide can be a deadly killer. This odorless, colorless gas, known by its chemical symbol CO, is the leading cause of accidental poisoning deaths in the United States each year. More than 1,500 people are killed annually and another 10,000 are injured. CO is produced by burning fuel, such as gasoline, propane, kerosene, wood, and natural gas.

Many people using gasoline or diesel-powered tools such as high-pressure washers, concrete cutting saws, power trowels, floor buffers, welders, pumps, compressors, forklifts, and generators in buildings or semi-enclosed spaces have been poisoned by CO.

Health Risks of Overexposure

CO poisons by entering the lungs and combining with hemoglobin, the oxygen-carrying substance in red blood cells. This reaction blocks the hemoglobin from taking up oxygen from the lungs. Red blood cells pick up CO quicker than they pick up oxygen. If there is a lot of CO in the air, your body may replace oxygen in your blood with CO. Interruption of the normal supply of oxygen causes cells and tissues in the body to die and puts at risk the functions of the heart, brain, and other organs.

CO poisoning can be reversed if caught in time. But even if you recover, acute poisoning may result in permanent damage to the parts of your body that require a lot of oxygen, such as the heart and brain.

Recognizing Overexposure

The initial symptoms of CO are similar to the flu (but without the fever). They include weakness, dizziness, sleepiness, and headache. Prolonged exposure may also result in visual disturbances, nausea, irregular breathing, convulsions, changes in personality, and loss of consciousness.

However, since CO poisoning causes confusion and disorientation, workers are often unable to recognize the symptoms of overexposure in time. Therefore, in addition to monitoring your own condition, watch coworkers for signs of CO toxicity. Workers also might have a false sense of security if they have previously used the equipment without problems.

If you or a coworker have any symptoms of CO poisoning:

- Immediately turn off equipment and go outdoors.
- Call 911 for medical attention or assistance.
- Do not drive a motor vehicle—get someone else to drive you to the hospital.

- Stay away from the work area and contact EH&S to measure the CO levels.

Avoiding CO Poisoning:

CO can overcome you without warning. Workers in areas with closed doors and windows can be incapacitated within minutes. Even in areas that appear to be well ventilated, CO can rapidly accumulate and build up to dangerous or fatal concentrations within minutes.

Opening doors and windows or operating fans does not guarantee safety. CO is a dangerous poison. Operating gasoline or diesel-powered engines and tools indoors, in partially enclosed areas or in trenches is risky business.

- Keep equipment properly maintained and serviced to reduce CO emissions.
- If equipment has a CO alarm, be sure it is calibrated according to manufacturer's recommendations.
- Always place gasoline and diesel-powered engines, and air compressors outside—away from air intakes and open doors or windows so that exhaust is not drawn indoors where CO can accumulate and become fatal.
- Consider the use of tools powered by electricity or compressed air if they are available and can be used safely.
- Use CO monitors where potential sources of CO exist.