



Carbon Monoxide at Hookah Lounges

Carbon monoxide (CO) is an odorless, colorless gas that is somewhat lighter than air. CO is formed by the incomplete burning of organic material. CO is a leading cause of poisoning deaths in the U.S, especially in the winter months when gas or oil furnaces are not properly ventilated. Year-round, CO can build up in poorly ventilated hookah lounges and produce a health hazard to workers and people who stay for extended periods.

HOW MIGHT I BE EXPOSED TO CO AT A HOOKAH LOUNGE?

Hookah lounges allow patrons to partake of tobacco products using charcoal to heat the tobacco without burning. As a result, CO and other pollutants are produced; elevated levels have been found in several studies of indoor air quality in hookah lounges. In one example, the CO level at a lounge in Illinois where an employee got sick was 130 parts per million (ppm). This level was much greater than the Occupational Safety and Health Administration (OSHA) permissible exposure limit of 50 ppm. The National Institute for Occupational Safety and Health recommends that CO not exceed 200 ppm at any time during a workday.

WHAT ARE THE SYMPTOMS OF CO POISONING?

The greater the CO exposure, the more serious the symptoms. At low levels, CO exposure causes no obvious effects, although people exposed to low CO levels may have decreased exercise tolerance and shortness of breath during exertion. Tightness across the forehead, flushed skin, and slightly impaired motor skills may also occur. The first symptom is usually a headache with throbbing temples.

Symptoms of mild to moderate CO poisoning may include nausea, lethargy, and malaise. As the CO level or exposure time increases, symptoms become more severe: irritability, chest pain, fatigue, reduced judgment, dizziness, and dimness of vision. Higher CO levels can cause fainting upon exertion, marked confusion, and collapse. If exposure continues, coma, convulsions, and death from respiratory failure can result.

WHAT MAKES CO DANGEROUS?

CO is odorless and colorless, so you cannot sense its presence. When breathed, CO interferes with the blood's ability to carry oxygen. Blood carries oxygen to body tissues by combining the oxygen with hemoglobin, a substance found in red blood cells. Unfortunately, CO combines with hemoglobin about 250 times better than oxygen does, forming carboxyhemoglobin (COHb).

So, exposure to CO in air creates COHb in your blood, which denies body tissues a sufficient supply of oxygen (a condition called hypoxia). The greater the CO exposure, the greater the risk of adverse health effects.

HOW IS CO POISONING TREATED?

The first step in any CO exposure is to remove those exposed from the affected area. Then ventilate and eliminate the CO source. In mild cases, symptoms disappear on their own or with the use of supplied oxygen. More severe poisoning requires supportive care for acute symptoms, including 100 percent oxygen, respiratory support, intravenous fluids, and heart monitoring. People successfully treated for CO poisoning may continue to suffer both severe and subtle nervous system effects.

HOW CAN HOOKAH LOUNGES PREVENT CO POISONING?

CO poisoning is preventable in hookah lounges by following these measures:

- Ensure adequate ventilation and air circulation to reduce CO levels.
- Install CO detector alarms. CO alarms can alert employees and patrons to dangerous levels of CO; however, these devices may be affected by other substances in charcoal and tobacco smoke, and either fail to work or produce nuisance alarms.
- Replace charcoal with electric heaters to smolder the tobacco in the hookah.

WHO REGULATES HOOKAH LOUNGES?

Hookah lounges are exempt from the Smoke Free Illinois Act because they are considered retail tobacco establishments. As retail establishments, they also are exempt from the Carbon Monoxide Alarm Detector Act. OSHA has authority over worker safety. Some local governments have passed laws concerning hookah lounges.

WHERE CAN I GET MORE INFORMATION?

Illinois Department of Public Health

Division of Environmental Health

525 W. Jefferson St.

Springfield, IL 62761

217-782-5830

TTY (hearing impaired use only) 800-547-0466

