TEAMSTERS Safety & Health FACTS
Safety and Health Department, International Brotherhood of Teamsters
25 Louisiana Avenue, NW, Washington, DC 20001 ◆ 202/624-6960 ◆ ibtsafety@teamster.org

CARBON MONOXIDE

What is carbon monoxide?

Carbon monoxide is a colorless, tasteless, odorless gas that is produced as a by-product of combustion, such as in automobile exhaust. This gas is present throughout our environment.

Who is exposed?

Harmful levels of carbon monoxide are a potential danger to: acetylene workers, blast furnace workers, boiler room workers, brewery workers, carbon black makers, coke oven workers, customs workers, diesel engine operators, dock workers, garage mechanics, metal oxide reducers, miners, organic chemical synthesizers, petroleum refinery workers, pulp and paper workers, steel workers, toll booth and tunnel attendants, and warehouse workers. One of the most common sources of exposure in the workplace is the internal combustion engine.

What hazards are associated with exposure?

Carbon monoxide exposure typically occurs through inhalation. This gas is an asphyxiant, which means that it deprives vital body organs of oxygen by displacing oxygen from the bloodstream. Be suspicious of carbon monoxide poisoning if you develop a headache, flushed face, dizziness, or weakness. Bear in mind that, although carbon monoxide has no telltale odor, it may mix with gases which do have an odor. Thus, the smell of other gases doesn't mean an absence of carbon monoxide.

The short-term (acute) health effects caused by carbon monoxide exposure may occur rapidly. Exposure to low levels can cause muscular clumsiness and difficulty in focusing vision, and it can interfere with memory. Exposure to higher levels can cause headache, dizziness, loss of consciousness, coma, and death. Carbon monoxide poisoning can damage the heart and nervous system. It may cause a heart attack.

The long-term (chronic) health effects can occur some time after exposure. Repeated exposure can cause heart disease and hardening of the arteries. Carbon monoxide exposure by pregnant women

can cause lowered birth weight in their offspring. High exposures in this population may result in fetal and infant death or severe brain and nervous system damage.

Carbon monoxide-exposed tobacco smokers are at increased risk of experiencing adverse health effects. Because smoking can cause heart disease, as well as lung cancer, emphysema, and other respiratory problems, it may worsen respiratory conditions caused by chemical exposures.

What can be done to reduce exposures?

Occupational exposure to carbon monoxide can be significantly reduced by implementing effective control measures and work practices.

- Use of combustion engines indoors should be avoided where there are safer alternatives.
- Adequate fresh air should be provided where combustion engines must be operated indoors.
- Tailpipe or stack exhaust hoses should be provided for any vehicles being run in a maintenance shop.
- Proper maintenance should be performed regularly on all equipment with combustion engines to help reduce the levels of carbon monoxide created during their operation.
- Combustion-powered vehicles parked indoors or at loading docks should not be allowed to idle unnecessarily.
- Truck cabs should be maintained to prevent exhaust fumes and gases from entering.
- Bulkheads and auxiliary fans should be installed to help direct airflow in large or irregular areas such as mine caverns and maintenance shops.