California Environmental Protection Agency
Air Resources Board

Carbon Monoxide

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What is carbon monoxide?

Carbon monoxide (CO) is a colorless, odorless gas. It results from the incomplete combustion of carbon-containing fuels such as gasoline or wood, and is emitted by a wide variety of combustion sources.

Health Effects from Exposure to Ambient Levels of Carbon Monoxide

Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen. Exposure to CO is especially harmful to those with heart disease, because the heart has to pump harder to get enough oxygen to the body. CO exposure has been associated with aggravation of angina pectoris and other aspects of coronary heart disease, decreased exercise tolerance in people with peripheral vascular disease and lung disease, impairment of central nervous system functions, and possible increased risk to fetuses. At high altitudes (such as in the Lake Tahoe Air Basin), these effects are worsened.

History of Carbon Monoxide Air Quality Standard

- In 1955, the Los Angeles County Air Pollution Control District established an air pollution alert system to prevent disasters. The first alert level for CO was 100 ppm.
- In 1959, the California Department of Public Health adopted air quality standards for CO at the "serious" level. These were 30 ppm for an eight-hour exposure and 120 ppm for a one-hour exposure.
- In 1969, the ARB adopted a standard for CO at 20 ppm for an eight-hour averaging period.
- In 1970, the ARB revised the CO standards to 10 ppm for 12 hours, and 40 ppm for one hour.
- In 1976, the ARB adopted a CO standard of 6 ppm for eight hours, for the Lake Tahoe Air Basin only.
- In 1982, the ARB revised the CO standards to 9 ppm for eight hours and 20 ppm for one hour. In 1989, the ARB retained these standards.

For more information on Ambient Air Quality Standards please contact Linda Smith at (916) 327-8225 or email at lsmith@arb.ca.gov.

Ambient Air Quality Standards