California Environmental Protection Agency
Air Resources Board

Ozone and Ambient Air Quality Standards

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What is Ozone?

Ozone, an important ingredient of smog, is a highly reactive and unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through complex reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Key pollutants involved in ozone formation are hydrocarbon and nitrogen oxide gases.

Health and Welfare Effects from Exposure to Ambient Levels of Ozone

Exposure to levels of ozone above the current ambient air quality standard can lead to human health effects such as lung inflammation and tissue damage and impaired lung functioning. Ozone exposure is also associated with symptoms such as coughing, chest tightness, shortness of breath, and the worsening of asthma symptoms. The greatest risk for harmful health effects belongs to outdoor workers, athletes, children and others who spend greater amounts of time outdoors during smoggy periods. Elevated ozone levels can reduce crop and timber yields, as well as damage native plants. Ozone can also damage materials such as rubber, fabrics and plastics.

For more information on Ozone and Health.

Review of Ozone Standard

In April 2005, the Air Resources Board approved a new eight-hour standard of 0.070 ppm and retained the one-hour ozone standard of 0.09 after an extensive review of the scientific literature. Evidence from the reviewed studies indicate that significant harmful health effects could occur among both adults and children if exposed to levels above these standards. The ozone standard review was mandated by the Children's Environmental Health Protection Act. See further information on the ozone ambient air quality standard review.

Ambient Air Quality Standards for Ozone		
Averaging Time	**California Standard**	**National Standards**
1 hour	**0.09 ppm**	----
8 hour	**0.070 ppm**	**0.075 ppm**

For a detailed history see History of Ozone and Oxidant Ambient Air Quality Standards.

For more information on Ambient Air Quality Standards, please contact Dr. Linda Smith at (916) 327-8225.