

Health Benefits for Cleaner-Burning Gasoline

California's Air Pollution Problem

- While California has significantly reduced pollution from cars and trucks, gasoline-powered vehicles and equipment still produce about one-half of the state's air pollution.
- The state's 24 million gasoline-powered cars and trucks, along with other gasoline-powered equipment such as lawn mowers and chain saws, burn over 13 billion gallons of gasoline a year and produce:

Almost one-half of all ozone-forming gases (ozone is a primary ingredient of smog),

Over 90 percent of benzene emissions, a substance known to cause cancer in humans, and

Over 90 percent of all carbon monoxide.

Who Gets Hurt by Air Pollution?

- Over 90 percent of Californians breathe unhealthy air at some time each year.
- In parts of southern California, ozone reaches unhealthy levels on one of every three days.
- Anyone can be affected by air pollution. However, those most susceptible include anyone who suffers from heart or lung diseases or problems such as asthma. Healthy children and adults who play or exercise vigorously are also at risk.
- High pollution levels can cause immediate health problems such as eye irritation, sore throats, and coughing. Chronic exposure to air pollution may produce lung damage, increase asthma, and cause cancer.

Cleaner-Burning Gasoline

- To help protect the public from air pollution-related health problems, the California Air Resources Board requires the use of cleaner-burning gasoline, an improved fuel that pollutes less. By June 1996, all gasoline sold in the state will be cleaner-burning gasoline.
- Cleaner-burning gasoline will significantly cut the amount of ozone-forming gases, toxic substances, and carbon monoxide that go into our air. However, it will not solve all of California's air pollution problems. Other measures such as Smog Check and low-emission vehicle standards are also needed to achieve healthy air.

**How Cleaner-Burning Gasoline
Helps Protect Your Health**

Cleaner-Burning Gasoline	Your Health
Reduces smog-forming gases	Protects against lung irritation and disease
Reduces emissions of toxic substances	Reduces cancer risk
Reduces carbon monoxide	Reduces risk for people with heart disease and other illnesses

How Cleaner-Burning Gasoline Reduces Air Pollution to Protect Your Health

Cleaner-Burning Gasoline	Pollution Reductions (Compared to 1994 summer gasoline)	Health Benefits
Lower Reid vapor pressure Lower aromatic hydrocarbon and olefin content Lower distillation temperatures Lower sulfur (also protects vehicle catalyts) Lower benzene content Added oxygen*	Smog-forming gases Volatile organic compounds (17% -- 190 tons/day) Nitrogen oxides (11% -- 110 tons/day)	Protects against: Breathing difficulties Lung tissue damage Aggravation of respiratory diseases (such as bronchitis and emphysema)
	Cancer-causing pollutants (benzene, 1,3-butadiene)	Reduces cancer risk from gasoline vehicle emissions by 30-40%
Added oxygen*	Carbon monoxide (11% -- 1300 tons/day)	Protects against: Chest pain in heart patients. Aggravation of chronic heart or lung disease, or anemia. Protects unborn children
Lower sulfur	Sulfur dioxide	Protects against:

(80% -- 30 tons/day)

Lung diseases and other air
pollution-related diseases

* The most commonly used oxygenates are methyl tertiary butyl ether (MTBE), ethonal, and ethyl tertiary butyl either (ETBE). In California, MTBE is currently used in over 90 percent of all oxygenated gasoline.

Reducing Exposure to Gasoline Vapors

- Although cleaner-burning gasoline pollutes less, all gasoline vapors contain hazardous substances. You should always avoid inhaling gasoline fumes and exhaust or swallowing any kind of gasoline.
- California service stations use vapor control equipment that reduces exposure to gasoline vapors. Follow the directions on the pump and don't top off your fuel tank. Topping off increases your exposure to harmful pollutants.
- Many gasoline nozzles are equipped with hold-open latches so you can move away from the vehicle during fueling. Both self-service customers and station employees can reduce their exposure to gasoline fumes by using these latches.