

Frequently Asked Questions: Ozone Pollution

What is ozone?

In the upper atmosphere, ozone helps protect our planet from exposure to too much harmful radiation. But near the ground, it's the lung irritant we all know as smog. The main ingredients or "precursors" of ground-level ozone are gases called nitrogen oxides (NOx) and chemicals called volatile organic compounds (VOCs), which react when mixed with sunlight.

Where does it come from?

Most nitrogen oxides come from car, truck and other motor exhaust, plus emissions from power plants and manufacturing. Volatile organic compounds originate mainly from mobile sources as well, though also from consumer products such as sprays and paints and from gasoline vapors. When regulators urge to avoid "topping off" your gas tank they are trying to reduce VOCs.

How does it harm us?

Ozone pollution is linked to the following health problems:

- Lung irritation and decreased lung function, even in otherwise healthy adults and children
- Aggravation of asthma, emphysema, bronchitis, and allergies, especially in children and the elderly
- Permanent lung damage
- Headache, nausea and fatigue
- Reduced resistance to infection

Who is at greatest risk?

Everyone can suffer health effects, but the people most susceptible to harm from ozone air pollution include:

- Individuals with heart disease – such as coronary artery disease or congestive heart failure
- Individuals with lung disease – such as asthma, emphysema or chronic obstructive pulmonary disease (COPD)
- Pregnant women
- Outdoor workers
- Children under age 14, whose lungs are still developing
- Athletes who exercise vigorously outdoors

What's the situation here?

Ozone is currently measured in two ways: by measuring average levels over a 1-hour period and by measuring average levels over the course of an 8-hour period. Our region does not currently meet federal standards for either measurement, let alone stricter state standards. The American Lung Association estimates that metro Sacramento's ozone pollution problem is among the nation's [ten worst](#).

When is ozone of biggest concern?

Ozone pollution is usually at its worst in the summer, when there's more heat to "cook" the ingredients. Our local regulators declare "Spare the Air" days when a ratio of weather and pollution conditions called the Air Quality Index is forecast to reach or exceed 127, a level that is unhealthy for sensitive groups. AQI readings above 150 are unhealthy for everyone and over 200 are very unhealthy.