

What is ozone?

Almost all of the oxygen in the atmosphere occurs in a molecule containing two oxygen atoms, but ozone is a gas composed of three atoms of oxygen. Ozone occurs both in the Earth's upper atmosphere and at ground level. Ozone can be good or bad, depending on where it is found.

What is good ozone?

Ozone occurs naturally in the upper atmosphere, six to 30 miles above the Earth's surface, where it forms a protective layer that shields us from the sun's harmful ultraviolet rays.

What is bad ozone?

Tropospheric, or ground-level ozone, is not emitted directly into the air, but can be created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. Ground-level ozone contributes to what we typically experience as "smog" or haze, which occurs most frequently in the summertime because of the increased sunshine.

Where does NO_x come from?

NO_x is emitted primarily by manmade sources such as vehicles, heavy construction equipment, industrial boilers and power plants.

Where do VOCs come from?

VOCs come from on-and off-road vehicle exhaust; gasoline storage and dispensing; solvents, consumer products, paints, industrial processes; and trees and shrubs.

What are the ozone levels in my community?

Air Pollution Map

Real-time air pollution information, including ozone concentrations, can be found by checking the Maricopa County Air Quality Department's air pollution map. The map displays current information from a network of air monitoring stations located in Maricopa County. For the air pollution map, visit: <http://www.maricopa.gov/aq/divisions/monitoring/Default.aspx>

Clean Air Make More App

The Clean Air Make More app gives you real-time Phoenix air quality information and air pollution statistics right on your smartphone or tablet, providing air quality forecasts, air quality restrictions, and the ability to report a Phoenix air quality problem. To download the free app visit: <http://cleanairmakemore.com/tools-downloads/app/>

FREQUENTLY ASKED QUESTIONS ABOUT OZONE

What are the health effects of ozone?

Ozone in the air we breathe, even relatively low levels, can harm our health. People with lung disease, children, older adults, and people who are active outdoors may be particularly sensitive to ozone.

Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground level ozone also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue.

OZONE CAN

- Make it more difficult to breathe deeply and vigorously.
- Cause shortness of breath and pain when taking a deep breath.
- Cause coughing and sore or scratchy throat.
- Inflame and damage the airways.
- Aggravate lung diseases such as asthma, emphysema, and chronic bronchitis.
- Increase the frequency of asthma attacks.
- Make the lungs more susceptible to infection.
- Continue to damage the lungs even when the symptoms have disappeared.

WHO IS THE MOST AT RISK?

Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure. Children are also more likely than adults to have asthma.

What can I do to reduce air pollution?

Ground-level ozone can affect your health and the environment. There are actions every one of us can take to reduce air pollution and keep the air cleaner and precautionary measures you can take to protect your health. Some of these actions include:

- ✓ Conserve electricity, especially on days with high ozone pollution advisories.
- ✓ Use household, workshop, and garden chemicals in ways that keep evaporation to a minimum.
- ✓ Limit the use of gas-powered lawn and garden equipment on high pollution days.
- ✓ Drive less and choose a cleaner commute like walking, light rail, or carpooling.
- ✓ Combine errands and reduce trips.
- ✓ Limit engine idling while in your car. Avoid waiting in long drive-thru lines.
- ✓ Keep your car engines properly tuned and be sure your tires are properly inflated.
- ✓ Re-fuel your vehicle after dark (or during cooler, evening hours).
- ✓ Don't top off your gas tank when filling up.

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