



Fact Sheet

South Carolina Department of Health and Environmental Control • www.scdhec.gov

Ground-level Ozone

What is it?

Ozone is a colorless gas that is made up of three atoms of oxygen.

Where can ozone be found?

There are two different places in the atmosphere where ozone is located. Ozone can be found in the stratosphere (up high) where it protects us from damaging ultraviolet (UV) radiation. This is called “good” ozone.

Ground-level ozone is located below the stratosphere, in the troposphere which is the air we breathe. At this location (nearby) ozone is a harmful air pollutant. Ground-level ozone is “bad” ozone. Remember, “good up high, bad nearby”.

Where do the pollutants come from that form “bad” ozone?

Oxides of nitrogen (NOx) and volatile organic compounds (VOCs) react in strong sunlight and heat to form harmful ground-level ozone in the air we breathe. Sources of NOx and VOCs include:

- Motor vehicle exhaust (NOx)
- Air emissions from industry (NOx and VOCs)
- Gasoline vapors (VOCs)
- Chemical solvents (VOCs)
- Gas-powered lawn and garden tools like lawn mowers and trimmers (NOx)

What are the health effects of “bad” ozone?

- It can worsen chronic bronchitis and asthma.
- It can cause chest pains, shortness of breath, wheezing, coughing, and nausea.
- It makes it harder for children, sick people, and even healthy people to breathe.
- Repeated exposure to high levels of ozone pollution may cause permanent lung damage.

What can you do to help decrease “bad” ozone levels?

- Carpool to work and school.
- Walk instead of driving whenever possible.
- Use a bike for errands or for work whenever possible.
- Keep cars well tuned and maintained.
- Try not to spill gas when filling up your car or gas-powered lawn equipment.
- In the summer, fill gas tanks in the cooler evening hours, after 6 p.m., when vapors won't have time to react with sunlight to form ground-level ozone.
- Conserve electricity.

What can you do to protect yourself from “bad” ozone?

- During ozone season, do outside activities in the mornings before it gets too hot.
- Don't stay outside for too long during the hottest times of the day.

For more information, visit:

<http://www.scdhec.gov/Ozone>

<http://www.epa.gov/air/ozonepollution/>

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