

## Air Quality Health Information

Unhealthy levels of ground-level ozone can impact the health of family members and co-workers—especially children, the elderly and individuals with heart or lung ailments. It's an important public health issue and a primary focus of this summer's Clean Air Indiana campaign.

**About Ozone:** Ground-level ozone, commonly referred to as smog, is not emitted directly into the air, but is created by chemical reactions between nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NO<sub>x</sub> and VOC.

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. Sensitive groups, such as children, the elderly and those with heart and lung problems are especially at-risk.

To learn more about ozone, please visit [http://www.in.gov/idem/files/factsheet\\_ozone.pdf](http://www.in.gov/idem/files/factsheet_ozone.pdf).

Like ozone, fine particle pollution also is an important public health issue. Unlike ozone, which is more likely to occur in the summertime, fine particle pollution is just as likely to occur in colder weather and is monitored year round.

**About Fine Particles:** Fine particles or particulate matter (PM), more commonly referred to as soot, is a complex mixture of extremely small particles and liquid droplets. PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles.

Fine particles, such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller—28 times smaller than the width of a human hair. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

To learn more about fine particles, please visit [http://www.in.gov/idem/files/factsheet\\_particulate\\_matter.pdf](http://www.in.gov/idem/files/factsheet_particulate_matter.pdf).

