What are the health effects of bad air?

Diesel Exhaust

Diesel exhaust from trucks, buses, construction equipment and trains contains particulate matter, nitrogen oxides and over 40 chemicals that are classified as "hazardous air pollutants" under the Clean Air Act.

In addition to the heart and lung diseases linked to all forms of fine particle pollution, the toxic particles in diesel exhaust also can cause cancer.

Car, bicycle and pedestrian commuters in Atlanta are exposed to toxic diesel fumes on a daily basis. Children riding school buses that have not had pollution control filters installed may be breathing diesel exhaust inside the cabin at concentrations three to five times higher than outside the bus.

Mothers & Others FOR CLEAN AIR

Georgia CONSERVANCY

Atlanta fails to meet national standards for two pollutants: ozone and fine particulate matter.

What are the health effects of ozone?

Ozone is an airway irritant that can cause inflammation, much like sunburn. This irritation can cause wheezing, coughing, pain when breathing deeply and breathing difficulties during exercise or outdoor activities. In healthy people, ozone can result in reduced lung capacity, permanent lung damage and increased susceptibility to respiratory illnesses like pneumonia and bronchitis. In people with asthma, ozone can trigger asthma attacks. Children and adults with asthma are at greater risk of attacks when ozone concentrations are high.

Children are particularly susceptible to ozone-related health problems because children spend more time outside than adults, their respiratory systems are still developing, and they breathe in more air per body weight than adults. Research studies suggest that active children in areas with high levels of ozone are more likely to develop asthma than children in areas where ozone levels meet the federal standard.

Atlanta's air has failed to meet the national standards for ozone since 1978. Therefore, children in Atlanta, particularly children with asthma, are at a higher risk of suffering breathing-related problems due to ozone pollution.

What are the benefits of reducing ozone concentrations?

The correlation between Atlanta's high ozone days and increased asthma attacks is clear: there is a 37 percent increase in asthma-related emergency department visits following smog alert days. It is also clear that when ozone levels decrease, so do asthma attacks. This was best demonstrated during the 1996 Summer Olympic Games in Atlanta when there was a 22 percent drop in automobile traffic and a resulting 28 percent drop in ozone. Simultaneously, there was a 40 percent reduction in acute care visits for asthma, an 11 percent reduction in asthma-related pediatric emergency room visits and a 19 percent reduction in asthma-related hospitalizations.

What are the health effects of particulate matter?

In addition to ozone, Atlanta's air also contains levels of fine particular matter (PM) that are too high, according to the limits set by the Environmental Protection Agency. Like ozone, PM can cause serious health problems, including decreased lung functioning and worsened asthma symptoms. PM also is associated with increased risk of premature death, heart disease and cancer. As with ozone, children, the elderly and those with chronic lung or heart disease are at greatest risk.

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More on Asthma in Georgia

According to 2007 data for the State of Georgia from the Georgia Department of Human Resources, Division of Public Health:

- 10 percent (137,000) of children ages 10 and younger have asthma
- 15 percent (56,000) of middle school students have asthma
- 16 percent (70,000) of high school students have asthma
- Asthma is one of the top three reasons for all pediatric inpatient admissions
- Children ages one to four have the highest rate of asthma-related emergency room visits
- Average cost of a child with asthma admitted to the hospital is $7,145
- On average, from 2000-2005, there were 117 asthma deaths per year
- Blacks are twice as likely as whites to be hospitalized with asthma, and 2.6 times more likely to die from asthma
- Emergency department charges related to asthma totaled $46 million and, hospitalization charges totaled more than $126 million in 2005

About Mothers & Others for Clean Air

Mothers & Others for Clean Air is a partnership of six leading environmental and public health organizations dedicated to improving air quality for all Georgians by educating the public about the negative health impacts of air pollution and engaging people in both individual change and public policy advocacy.

American Lung Association
www.lungusa.org

Children's Healthcare of Atlanta
www.choa.org

Georgia Conservancy
www.georgiaconservancy.org

Morehouse School of Medicine
www.msm.edu

Physicians for Social Responsibility
www.psr.org

Rollins School of Public Health
www.sph.emory.edu

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