Air Pollution & Health Impacts
Recent Studies

- German researchers say they have found some of the strongest evidence yet linking traffic pollution to childhood allergies. The risk of developing asthma, hay fever, eczema or other allergies is about 50 percent higher for children living 50 metres (yards) from a busy road than for those living 1,000 metres away, they said – June 2008

- A nationwide University of Washington study has provided further evidence that exposure to air pollution raises the risk of heart attacks, heart disease and stroke. The study was focused on exposure to a common but invisible, fine particulate form of air pollution produced by diesel exhaust, coal-fired power plants and many other sources. The results, though derived from a project involving only older women, almost certainly apply to men as well, researchers said. The UW scientists found that an increase of 10 points in the PM2.5 levels increased a woman's risk of a heart attack or other "cardiovascular event" by 24 percent and risk of death from heart disease by 76 percent. – February 2007, *New England Journal of Medicine*

- In the largest and longest study of its kind, USC researchers have found that children living near busy highways have significant impairments in the development of their lungs that can lead to respiratory problems for the rest of their lives. The 13-year study found that the damage from living within 500 yards of a freeway is about the same as that from living in communities with the highest pollution levels. – January 2007, *Lancet*

- According to researchers, the risk of respiratory death more than doubled in infants aged 7 months to 12 months who were exposed to "high average" levels of particulate matter. The risk of dying of SIDS went up by 15 percent to 19 percent for every 1 part per hundred million increase in average nitrogen dioxide levels at two months before death. The researchers also found that younger infants were more likely to suffer higher rates of death from respiratory illness if they were exposed to higher levels of carbon monoxide two weeks before death. – August 2006, *Pediatrics*

- When air pollution in a city declines, the city benefits with a directly proportional drop in death rates, according to a new study published in The American Journal of Respiratory and Critical Care Medicine. For each decrease of 1 microgram of soot per cubic meter of air, death rates from cardiovascular disease, respiratory illness and lung cancer decrease by 3 percent — extending the lives of 75,000 people a year in the United States. – March 2006

- Researchers say long-term exposure to air pollution may contribute to or accelerate hardening of the arteries. The researchers found carotid artery intima-media thickness or (CIMT) rose by 3.9 percent to 4.3 percent for every 10 ug/m3 increase in PM2.5. They found an even greater association between air pollution and CIMT among women, people over 60 and patients taking cholesterol-lowering medication. – Nov. 2004

- New research shows that teenagers who grow up in heavy air pollution have reduced lung capacity, putting them at risk for illness and premature death as adults. During the eight-year study, University of Southern California researchers found about 8 percent of 18-year-olds had lung capacity less than 80 percent of normal, compared with about 1.5 percent of those in communities with the least pollution. – Sept. 2004

- EPA scientists urge the government to consider imposing stricter limits on the level of particulate matter 2.5 in the nation's air because evidence shows that PM 2.5 contributes to sickness and death at its current level. – Sept. 2003

- Researchers at St. Mary's Hospital in Portsmouth, England found that while most asthma attacks suffered by children are related to viral infections, they are more serious if the child has been exposed to nitrogen dioxide from ordinary traffic pollution. – June 2003

- Canadian scientists published information indicating that air pollution is most likely the reason behind gene mutations of herring gulls near steel mills in Hamilton, Ontario. The scientists were able to duplicate the mutations in mice based on air quality. The researchers expressed concern that these mutations may also occur in humans. – Jan. 2003

- UCLA School of Public Health research has shown that people living or working near major freeways are exposed to 30 times the concentration of dangerous particles from motor vehicle emissions. - Oct. 2002

- Long-term exposure to air pollution significantly raises the risk of dying from lung cancer. Brigham Young University and New York University researchers found that for every 10 micrograms of fine particulate pollution, lung cancer increases 8 percent and heart and lung related causes increase 6 percent. - March 2002, *JAMA*

- Air pollution causes the blood vessels of healthy people to close up which may cause heart attacks and other cardiovascular problems, according to University of Michigan and University of Toronto researchers. - March 2002, *JAMA*

- Air Pollution may cause asthma, according to University of Southern California researchers. For the first time, researchers have shown that children breathing heavily polluted air are more likely to develop asthma. - Feb. 2002

- Korean researchers and the Harvard School of Public Health concluded that air pollutants are significant risk factors for acute stroke death. Deaths in Seoul between 1995 and 1998 increased consistently with rising concentrations of fine particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxide or ozone. – Feb. 2002

- Cleaner air improves children's lung function, according to researchers at the University of Southern California. - Dec. 2001

- Ozone pollution increases school absenteeism because of respiratory illnesses, according to University of Southern California researchers. - Dec. 2001, *Epidemiology*

- Smog is harmful to babies and fetuses causing stillbirths, infant deaths, and low birth weight, according to UCLA researchers. - Dec. 2001, *Epidemiology*

- Playing sports in high ozone areas may increase asthma risk, according to a study presented for the American Thoracic Society. - Summer 2001

- A change in traffic patterns to reduce congestion for the 1996 Summer Olympics in Atlanta significantly decreased the number of asthma acute care events by over 41 percent. - Feb. 2001 JAMA

- Air pollutants slow children's lung development over time, according to University of Southern California researchers. - Oct. 2000

- Children who live near heavily traveled roads and highways are at greater risk of developing cancer, including leukemia, according to a study conducted by the University of Colorado. - March 2000

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