



## ***EPA Celebrates***

### ***Children's Health Month 2010 Healthy Communities for Healthy Children***

#### ***Background***

Since 1928, the President of the United States has proclaimed the first Monday in October as National Child Health Day as requested by a joint resolution of Congress. In 1992, the American Academy of Pediatrics established October as Child Health Month in order to focus national attention on children's health issues. EPA Administrator Lisa P. Jackson has reaffirmed that it is the policy of the U.S. Environmental Protection Agency (EPA) to consider the health of pregnant women, infants and children consistently and explicitly in all activities the agency undertakes.

Children are different from adults in how they interact with their environment and how their health may be affected by these interactions. Children eat more, drink more and breathe more than adults in proportion to their body weight; therefore, their food, water and air must be healthy if they are to thrive. For example, when a child is exercising at maximum levels, such as during a soccer game or other sports event, they may take in 20 to 50 percent more air -- and more air pollution -- than would an adult in comparable activity. Children play and learn by crawling, they put their hands in their mouths, and they spend lots of time outdoors -- these behaviors can increase exposures to environmental contaminants.

The good news is that there are many ways to reduce or prevent harmful exposures. While EPA can research the risks of exposure and regulate accordingly, parents and caregivers can take simple steps in the everyday environments of children that will promote healthy growth and development.

The physical, chemical, biological and social environments in which children develop play a critical role in their health.

Home and school environments, both inside and outside, can have major impacts on children's health. Many of our nation's school buildings are old and in poor condition. The healthy school environments web site ([cfpub.epa.gov/schools/index.cfm](http://cfpub.epa.gov/schools/index.cfm)) is designed to provide one-stop access to the many programs and resources available to help prevent and resolve environmental issues in schools. In homes, EPA provides information for addressing potentially

harmful exposures from indoor air quality, mold, moisture, radon, pesticides and chemicals, wood smoke, drinking water, asthma triggers and secondhand smoke.

There are many differences between children and adults in the ways that they respond to air pollution. Infants take 30-60 breaths per minute, compared to adults who take 12-20. Additionally, children take in more air per unit body weight at a given level of exertion than do adults. When a child is exercising at maximum levels, such as during a soccer game or other sports event, they may take in 20 to 50 percent more air -- and more air pollution -- than would an adult in comparable activity. Children's airways are also narrower than adults, which can make them more susceptible to the harmful effects of pollutants in the air.

While in 1969 almost half of all students walked or bicycled to school,<sup>1</sup> today less than 15 percent perform this daily physical exercise.<sup>2</sup> The decline in walking and bicycling has had an adverse effect on traffic congestion, air quality around schools, and a variety of health problems such as obesity, diabetes, and cardiovascular disease.<sup>3</sup>

Indoors, asthma triggers include dust mites, mold, cockroaches and other pets, and secondhand smoke. In response to the epidemic of childhood asthma, EPA has created an asthma education and outreach program ([www.epa.gov/asthma](http://www.epa.gov/asthma)). EPA has provided information on asthma management in school environments and information on asthma triggers and action steps to reduce the presence of triggers at the indoor air quality website ([www.epa.gov/asthma/triggers.html](http://www.epa.gov/asthma/triggers.html)).

Poor outdoor air quality can also aggravate asthma and affects children differently than adults. Ground-level ozone, airborne particles, carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide and toxic air pollutants are all of concern ([www.epa.gov/air/toxicair/newtoxics.html](http://www.epa.gov/air/toxicair/newtoxics.html)). One way to protect children from the harmful effects of outdoor air pollution caretakers is to monitor the EPA website ([www.airnow.gov](http://www.airnow.gov)) for local air quality information based on the Air Quality Index (AQI). The AQI is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. The AQI focuses on health effects you may experience within a few hours or days after breathing polluted air.

Lead poisoning is also a problem among young children. Lead from old paint may contaminate dust and be ingested by small children playing nearby. A child is at greatest risk for lead poisoning from paint sources if he or she lives in a home built prior before 1978. Lead causes a range of irreversible health effects, from behavioral problems to learning disabilities. EPA offers a number of tips to reduce children's exposure to lead ([www.epa.gov/oppt/lead/pubs/leadinfo.htm#protect](http://www.epa.gov/oppt/lead/pubs/leadinfo.htm#protect)), and has new regulations requiring the use of lead-safe practices when renovating homes built before 1978 ([www.epa.gov/lead/pubs/renovation.htm](http://www.epa.gov/lead/pubs/renovation.htm)).

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<sup>1</sup> "Transportation Characteristics of School Children," Report No. 4, Nationwide Personal Transportation Study, Federal Highway Administration, Washington, DC, July 1972.

<sup>2</sup> Data from the 2001 National Household Travel Survey conducted by Federal Highway Administration were used as the source.

<sup>3</sup> "Physical activity and the health of young people," U.S. Centers for Disease Control & Prevention, Fact Sheet, 2004.

Children are particularly sensitive to microbial contaminants in drinking water because their immune systems are still developing. Caretakers who rely on drinking water from local community water systems can take steps to protect their children from contaminated water. Residents can review annual Consumer Confidence Report ([www.epa.gov/safewater/consumer/itsyours.html](http://www.epa.gov/safewater/consumer/itsyours.html)) for their community water system. For those that rely on well or source water to supply their drinking water, EPA's website on Citizen Involvement in Source Water Protection ([cfpub.epa.gov/safewater/sourcewater/sourcewater.cfm?action=Involvement](http://cfpub.epa.gov/safewater/sourcewater/sourcewater.cfm?action=Involvement)) provides a number of tips.

Children may be exposed to pesticides in their homes and schools, on playgrounds, lawns, athletic fields, and public parks and food, entering their bodies through the skin, lungs, or orally. Many pesticides are stored in body fat and accumulate over time. Infants and small children are especially vulnerable because they absorb substances faster and have more difficulty eliminating them. EPA has tips and practices to reduce childhood exposure to pesticides ([www.epa.gov/opp00001/controlling/index.htm](http://www.epa.gov/opp00001/controlling/index.htm)).

Children, by their very nature, deserve our focused attention and care. Their bodies are different than adults, their behaviors are different, and their interactions with the environment are different. Protecting the health of children is a compelling inducement to improving our environment, both during Children's Health Month and throughout the year, in the United States and around the world.

***Learn more at [www.epa.gov/children](http://www.epa.gov/children)***

- Executive Order 13045 makes children's health protection a priority of federal agencies: [epa.gov/ochp/ochpweb.nsf/content/whatwe\\_executiv.htm](http://epa.gov/ochp/ochpweb.nsf/content/whatwe_executiv.htm)
- To research the complex and sensitive nature of children's exposures in the environment, EPA and the National Institute of Environmental Health Sciences established Children's Environmental Health Centers: <http://www.epa.gov/ncer/childrenscenters/>
- To collect and understand data and trends in children's environmental health, see America's Children and Environment: [epa.gov/envirohealth/children](http://epa.gov/envirohealth/children)
- For help from the medical and nursing experts in children's environmental health, see the Pediatric Environmental Health Specialty Units at [www.PEHSU.net](http://www.PEHSU.net)