



Children's Environmental Health 2005

A Summary of EPA Activities



The mission of the United States Environmental Protection Agency (EPA) is to protect human health and the environment. After the 1993 publication of *Pesticides in the Diets of Infants and Children* by the National Research Council, EPA launched a major Federal effort to address the unique risks children face from a multitude of environmental agents.

Children are different from adults and may be more vulnerable to environmental exposures.

Consider that:

- children's neurological, immunological, digestive and other bodily systems are still developing and are more easily harmed;
- children eat more food, drink more fluids, and breathe more air than adults in proportion to their body mass—their food, fluids, and air therefore must be safe; and
- children's behavior patterns—such as crawling and placing objects in their mouths—often result in greater exposure to environmental contaminants.

Because of these characteristics, children may not be sufficiently

protected by regulatory standards that are set based on risks to adults. EPA has forged partnerships and taken increasingly more steps to protect children's health from the variety of contaminants and pollutants that may affect them in the air they breathe, the water they drink, and the food they eat.

We direct our efforts toward ensuring that their homes, schools, and playgrounds provide the necessary environmental conditions for normal growth and development. We focus on preventing exposure as a first-line defense against harmful environmental pollutants and we continue to work to improve environmental protections and health outcomes. This annual publication highlights a variety of recent EPA work.

Children's Environmental Health Awards

Launched in 2005, the Children's Environmental Health Awards serve to increase awareness, stimulate activity, and recognize efforts that protect children from environmental health risks at the local, regional, national, and international levels. In addition to the Excellence Award winners, EPA recognized 113 organizations for their dedication to protecting children's health.



2005 Children's Environmental Health Excellence Award

- Agency for Toxic Substances and Disease Registry, *Great Lakes Human Health Effects Research Program*, Atlanta, Ga.
- The American Legacy Foundation, *Truth®*, *Youth Advisory Panel*, *Youth Speakers Bureau*, and *Youth Empowerment Grants*, Washington, D.C.
- American Lung Association of Washington, *Master Home Environmentalist Program™*, Seattle, Wash.
- The Association of Occupational and Environmental Clinics, Pediatric Environmental Health Specialty Unit Program (PEHSU), Washington, D.C.
 - The Rocky Mountain Region PEHSU, Denver, Colo.
 - The Southeast PEHSU, Atlanta, Ga
 - The Southwest PEHSU, Tyler, Texas
- *Childhood Lead Action Project*, Providence, R.I.
- Columbia Center for Children's Environmental Health, *IPM Interventions and Healthy Homes Healthy Child Community Education and Outreach Project*, New York, N.Y.
- The Farmworker Justice Fund, Inc., *Project Clean Environment for Healthy Kids*, Washington, D.C.
- Meghan Pasricha, *The Anti-Tobacco Action Club*, Hockessin, Del.
- The National Nursing Centers Consortium, *Lead Safe Babies*, Philadelphia, Pa.
- Public Health Seattle and King County, *The Healthy Homes Asthma Project*, Seattle, Wash.
- Public Health Seattle and King County, *The Tacoma Smelter Plume Project*, Seattle, Wash.
- The Real World Foundation, *Asthma Free School Zone*, New York, N.Y.
- City of St. Louis Department of Health, Department of Public Safety, *Lead Safe St. Louis Task Force*, St. Louis, Mo.
- West Harlem Environmental Action (WE ACT), *Environmental Health Program*, New York, N.Y.
- The Western North Carolina Regional Air Quality Agency, *Western North Carolina School Bus Retrofit Project*, Asheville, N.C.



Visit www.epa.gov/children for 2006 awards information.

Helping Children Breathe Easier

Both indoor and outdoor air pollution can adversely affect children's health and is a major threat to normal growth and development. In the United States, asthma is an epidemic, affecting more than 6 million children under 18 years of age.

- **Controlling Asthma:** EPA raises awareness about managing environmental asthma triggers so that asthmatics can reduce the number and severity of episodes, emergency room visits, hospitalizations, and missed school and work days. Asthma prevalence and negative health outcomes are more common among African Americans, some Hispanic children, and among families with limited education and lower income. EPA has developed *Help Your Child Gain Control Over Asthma* to provide targeted information to improve asthma outcomes. To receive a copy of the booklet, call 1-800-438-4318 or visit www.epa.gov/asthma.
- **Simple Things:** EPA and the Ad Council are sponsoring *The Childhood Asthma Public Service Campaign* to increase understanding about asthma, asthma triggers, and ways to limit exposure to environmental factors that can trigger asthma attacks. This year, the campaign messages focus on "simple things" that parents can do to manage their child's asthma. The materials are in

English and Spanish for television, radio, and newspaper. As a result of this campaign, more than 1 million different viewers have visited the Web site and 40,000 hotline calls have been received since March 2001. Visit www.epa.gov/asthma.

- **National Environmental Leadership Award in Asthma Management:** EPA recognizes health plans and health care providers who have demonstrated leadership in managing environmental triggers as part of a comprehensive asthma management program. The 2005 winners are: Optima Health (Virginia Beach, VA) and Children's Mercy Hospitals and Clinics (Kansas City, MO). In addition, the Neighborhood Health Plan of Rhode Island and the Connecticut Children's Medical Center received honorable mentions. Application information for the 2006 Awards is available at www.epa.gov/asthma.
- **Learning about Air Quality:** Local air quality affects how we live and breathe. For children, whose lungs are still developing, the local air quality may be poor enough to limit outdoor activities. The AIRNow Web site was developed in partnership with the National Weather Service, National Parks Service, and others to provide the public daily air quality forecasts and real-time air quality conditions for more than 3 million people in 300 U.S. cities. Visit www.airnow.gov.
- **EnviroFlash:** EnviroFlash provides free information on ozone and particle pollution forecasts through e-mail and mobile text messaging. To join more than 5,000 subscribers in 38 cities, visit www.airnow.gov and click on the EnviroFlash logo.





- **Diesel School Buses:** *The Clean School Bus USA* initiative has created partnerships with community, industry, and business leaders to improve the health of school children across the country by reducing diesel pollution on school buses. Buses are being retrofitted with emissions control technology, switched to cleaner fuels, or replaced with new, cleaner models. As of April 2005, the program included 150 school districts, reducing emissions on more than 20,000 school buses for two million children.

Visit www.epa.gov/cleanschoolbus.

Preventing Childhood Exposure to Secondhand Smoke

A recent EPA study states that approximately three million children ages six and under are exposed to environmental tobacco smoke, especially in low-income, low-education households. Environmental tobacco smoke increases the risks of asthma episodes, middle ear and lower respiratory tract infections, such as pneumonia and bronchitis, recurring colds, coughs, wheezing, and decreases lung function.

- **Take the Smoke-free Home Pledge:** With more than 1,700 national, state, and local organizations promoting the *Smoke-free Home Pledge Campaign*,

EPA is helping parents, caregivers, teachers, medical professionals, and others protect children from environmental tobacco smoke. The Campaign encourages everyone to choose not to smoke in the home, car, or anywhere children are present. The pledge can be taken online at www.epa.gov/smokefree.

Protecting Children from too much Sun

Children must be protected from overexposure to the sun and its ultraviolet (UV) rays. UV rays are classified as a human carcinogen. Serious health effects, including skin cancer, eye damage and cataracts, and immune system suppression can be caused by overexposure to the sun. Skin cancer is the most common, yet preventable, type of cancer in the United States.

- **SunWise:** Currently, more than 12,000 schools and informal learning centers (up from 10,500 in 2004) are registered in the SunWise Program, which started in 2000 to teach children and their caregivers how to protect themselves from overexposure to the sun. SunWise education materials have been shown to be effective in children ages five to twelve by reducing sunburns by 11 percent and reducing the desire for a tan by 10 percent. Materials and information are available in English and Spanish at www.epa.gov/sunwise.

Protecting Children from Lead Poisoning

Lead is toxic and particularly harmful to young children, but lead poisoning is preventable. EPA and other Federal agencies have been working to protect children from these effects and are committed to eliminating childhood lead poisoning by 2010. The ongoing reduction in the number of children with elevated blood lead levels, from 1.4 million in the early 1980's to 310,000 in 2002, demonstrates the success of Federal, State and local efforts. To further these reductions, EPA is launching a program to ensure the use of lead-safe work practices by the renovation, repair, and painting industries.

- **Lead Education:** Children in minority populations, children from low income families, and children who live in older homes tend to have higher exposures and higher blood-lead levels than the national average. EPA and Head Start educated teachers, parents, and children in 75 Head Start centers in New York, Philadelphia, Los Angeles, Chicago, and Houston, reaching about 61,000 people about the dangers of lead poisoning by distributing informational materials. Visit www.epa.gov/lead.
- **Lead Grants:** EPA has established a competitive grant program to reduce incidences of childhood lead poisoning in vulnerable populations, such as those with higher-than-average blood-lead levels. In addition, EPA provides grants to Native American communities to assist in assessing the extent of childhood lead poisoning and to implement effective education programs.

Protecting Children from Mercury in Fish

Some fish and shellfish contain higher levels of mercury that may harm an unborn baby or young child's developing nervous system. The risks from mercury in fish and shellfish depend on the amount eaten and the levels of mercury present. Therefore, the Food and Drug Administration (FDA) and EPA are advising women who are pregnant or may become pregnant, nursing mothers, and young children to avoid some types of fish and eat fish and shellfish that are lower in mercury.

- **Fish Consumption and Health:** Last year, EPA and the Food and Drug Administration (FDA) began distributing the brochure titled *What You Need to Know About Mercury in Fish and Shellfish*, targeting women of childbearing age and physicians. Approximately five million copies of this brochure, in English and Spanish, have been distributed to more than 200,000 members of United States medical and public health organizations. EPA and FDA promoted the fish advisory program at major medical and environmental health conferences. EPA also continues to distribute the brochure, *Should I Eat the Fish I Catch?* (with versions in English, Spanish, Korean, Vietnamese, Hmong and Cambodian), that discusses ways to reduce health risks from eating fish containing chemical pollutants. Representatives from EPA distributed this brochure at the 2005 National Boy Scout Jamboree. Visit <http://www.epa.gov/waterscience/fish/>.



Keeping Pesticides Away from Children

In regulating pesticides, EPA considers children's exposure to pesticides in their diets, their drinking water, and in their home and school. These considerations include examining a variety of adverse health effects, such as acute poisoning, disruption of the hormone and immune systems, neurological damage, and cancer. EPA also has outreach and education materials aimed at teaching children and adults how to use pesticides safely to reduce children's exposure.

- **Poison Prevention:** More than 70,000 cases of children exposed to pesticides were reported to poison centers last year. Many more cases go unreported. EPA and the American Association of Poison Control Centers are working to raise awareness of pesticide poisoning prevention. For example, information from these organizations recently appeared on *Despierta America*, a television program that reaches over one million Spanish-speaking households.
- **Outreach:** Occupational exposure and language barriers place many Hispanics at high risk for pesticide exposure. Pesticide product labels, which contain important use and emergency care information, are written in English, and may not be easily understood by the 28 million Spanish speakers living in the United States. In an effort to reach this

population, EPA participated in a series of media interviews with more than three million listeners.

EPA and the National Head Start Association are raising awareness to prevent pesticide poisonings in children with a room-by-room poison prevention checklist. Visit www.epa.gov/pesticides.

Training Health Care Providers to Address Environmentally-Related Illness

EPA recognizes that health care providers can play a key role in helping to prevent, diagnose, and manage children's health risks related to the environment. Yet most health care providers are not schooled in environmental health. EPA is building a cadre of children's environmental health champions in North America and throughout the world.

- **Pediatric Environmental Health Specialty Units (PEHSUs):** PEHSUs provide consultation, information, training, and referrals to health care professionals, agencies, and the public on pediatric environmental health issues. There is a network of 13 Units in North America and several are being created in other parts of the world. This year, the World Health Organization, the International Pediatric Association, and the delegates to the Health and



Environment Ministers of the Americas met and endorsed the adaptation and expansion of a PEHSU model for other nations. PEHSUs are supported by the Agency for Toxic Substances and Disease Registry, and EPA and are administered by the Association of Occupational and Environmental Clinics. They were awarded one of fifteen Children's Environmental Health Excellence Awards in 2005. For more information, visit www.aoc.org and www.atsdr.cdc.gov/child/ochchildhlth.html.

- **Training Materials for Developing Countries:**

EPA supports the World Health Organization effort to develop comprehensive training materials for health care providers internationally. Materials are being tested in training sessions in several countries and will cover a plethora of children's environmental health issues for formally and informally trained providers and in several different formats, including a book, available electronically, and in pamphlets. Visit www.who.int/ceh.

- **Air Pollution Educational Materials:**

EPA has created several resources for health professionals to use when educating patients about the health effects of air pollution. Visit www.airnow.gov and click on "Health Providers" to download asthma fact sheets and medical posters.

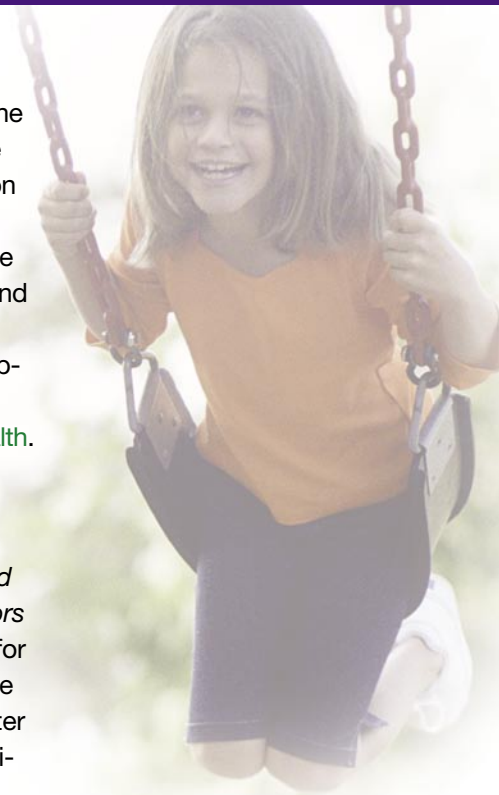
- **Ozone and Health:** During the summer months, millions of people in the United States are exposed to ground-level ozone (smog) at levels that can cause uncomfortable and damaging respiratory symptoms. *Ozone and Your Patients' Health* is an online training course for

medical professionals that describes the physiological mechanisms responsible for the symptoms such as lung function changes associated with exposure to ground-level ozone. It also gives advice to patients about exposure to ozone and provides practical tools to help them understand what triggers asthma symptoms and how to alleviate them. Visit www.epa.gov/air/oaqps/eog/ozonehealth.

- **Mold and Health:** *Guidance for Clinicians on the Recognition and Management of Health Effects Related to Mold Exposure and Moisture Indoors* was published last fall by the Center for Indoor Environments and Health at the University of Connecticut Health Center with support from EPA. This free publication is available at <http://oehc.uchc.edu/clinser/indoor.htm>.

- **Drinking Water:** *Tap into Prevention* is a continuing education video/DVD that explains potential health risks from exposure to microbial and chemical contaminants in drinking water and demonstrates actions health care providers can take in their practices. Visit www.epa.gov/safewater/healthcare/index.html.

- **Pediatric Asthma Initiative:** With EPA's support, the National Environmental Education Teaching Foundation and the National Institute of Environmental Health Sciences defined competencies and developed environmental history forms for environmental triggers of asthma. These tools are built upon the best current practices and existing resources. Visit www.neetf.org/health/asthma.htm.





Studying Environmental Exposures and Children's Health

• **National Children's Study:** This effort will examine the effects of environmental influences on the health and development of more than 100,000 children across the United States, following them from before birth until age 21. The goal of the study is to improve the health and well-being of children. The study defines "environment" broadly and will take a number of issues into account including:

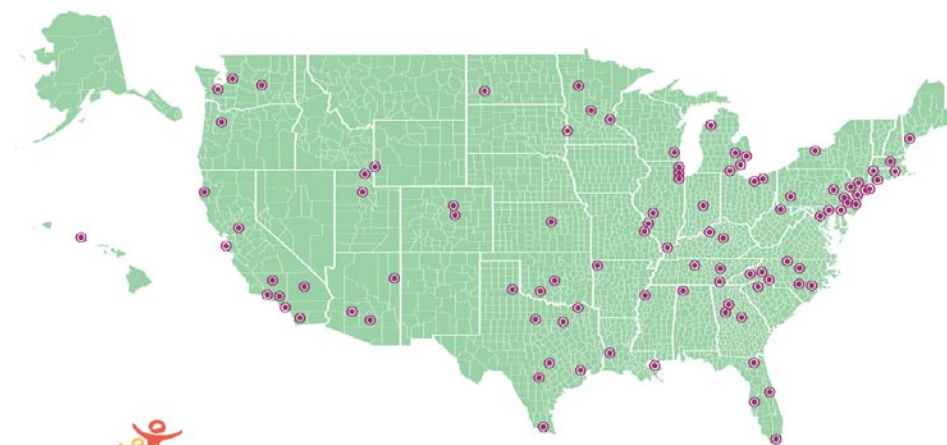
- Natural and man-made environmental factors
- Biological and chemical factors
- Physical surroundings
- Social factors
- Behavioral influences and outcomes

- Genetics
- Cultural and family influences and differences
- Geographic locations

Researchers will analyze how these elements interact with each other and what helpful and/or harmful effects they might have on children's health. By studying children through the different phases of growth and development, researchers will be better able to understand the role of these factors on health and disease. The study has designated more than 100 locations across the United States where it will seek to recruit and enroll eligible families for participation. The locations were selected to ensure that children across the nation are fairly represented.

The National Children's Study will be one of the richest information resources available for answering questions related to

National Children's Study Locations



children's health and development and will form the basis of child health guidance, interventions, and policy for generations to come. It is anticipated that the preliminary results from the first years of the study will be available in 2008-2009. The study is authorized by the Child Health Act of 2000 and awaits assured funding. The study sponsors are the National Institutes of Health and the Centers for Disease Control and Prevention (both part of the U.S. Department of Health and Human Services) and the EPA. Visit www.nationalchildrensstudy.gov and join the study listserv at ncs@mail.nih.gov.

- **International Interest and the National Children's Study:** *The National Children's Study* has sparked interest in many other countries about improving research on children's environmental health. The study has therefore teamed with the World Health Organization to promote research in developing and developed countries. This research can be integrated with the research questions of the study for everyone's benefit.

International cooperation on children's environmental health research extends the reach and scope of the study and presents opportunities for different approaches in study design. Common measures in all longitudinal cohort studies of the environment and children's health strengthen all the studies and builds the global pediatric environmental health infrastructures. Around the world, researchers are better able to study rare but important childhood diseases, such as cancer and birth defects.

- **Asthma Research Results Highlights Report:** Asthma research by EPA and collaborators on the causes, triggers and best practices for management is providing critical scientific information to

address this growing public health threat. EPA's *Asthma Research Results Highlights Report* summarizes accomplishments in asthma research over the last five years and outlines future directions in asthma research. For more information on this report, visit www.epa.gov/ord/asthma.

- **Children's Health Research Centers:** Many chronic childhood diseases, such as asthma, autism and learning deficiencies have consistently been linked to environmental factors. In 1998 EPA and the National Institute of Environmental Health Science (NIEHS) initiated a unique program to fund Children's Environmental Health Research Centers to investigate the role of environmental exposures in burdensome childhood disorders. Each center is a university-community partnership conducting basic science, exposure, epidemiological, and/or intervention research.

A mini-monograph, including an overview and six "Lessons Learned" papers by the centers, is available at: www.ehp.niehs.nih.gov

University of California, Berkeley

Agricultural pesticide exposures and effects on pregnant women and children
www.chamacos.org

University of Southern California

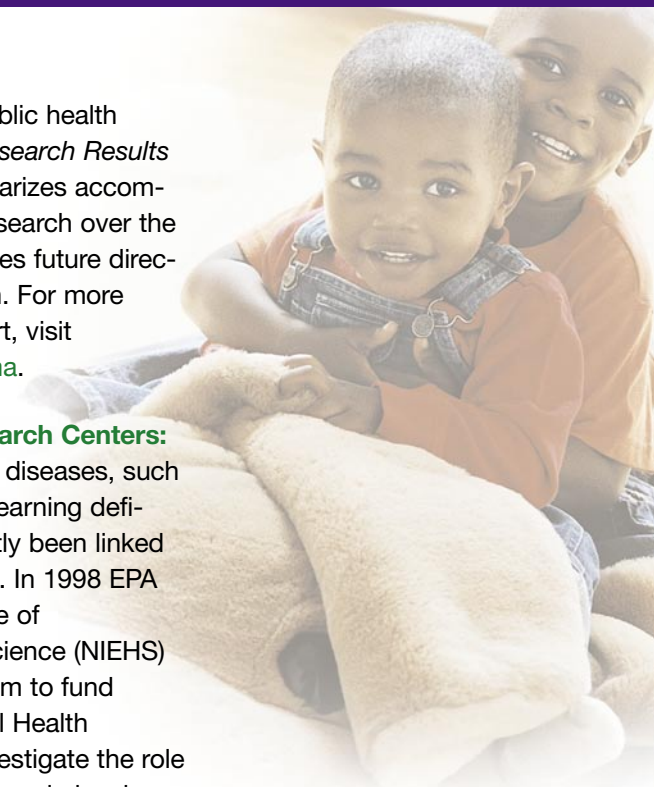
The effects of traffic-related air pollution on asthma in an urban population

Johns Hopkins University

Urban air pollutants and allergens effects on the development of asthma

Columbia University

Cumulative impact of household pesticides, air pollutants, environmental tobacco smoke and heavy metal exposures on growth, asthma and cancer risk
www.ccceh.org





Mt. Sinai Medical School

The effects of pesticides, PCBs, endocrine disrupting chemicals and the built environment on growth and development

University of Washington

Exposure pathways and health effects of agricultural pesticides
<http://depts.washington.edu/chc/>

University of California Davis

Environmental factors in childhood autism
www.vetmed.ucdavis.edu/cceh/

Children's Hospital Cincinnati

Lead and tobacco effects on neurodevelopment
www.cincinnatichildrens.org/research/project/enviro/default.htm

University of Med/Dentistry New Jersey

Environmental chemicals and autism development
www.eohsi.rutgers.edu/childhood/index.shtml

University of Illinois at Urbana-Champaign

The effects of mixtures of PCBs and mercury on neurodevelopment and hearing loss
www.cvm.uiuc.edu/vb/friends_center/

Harvard University

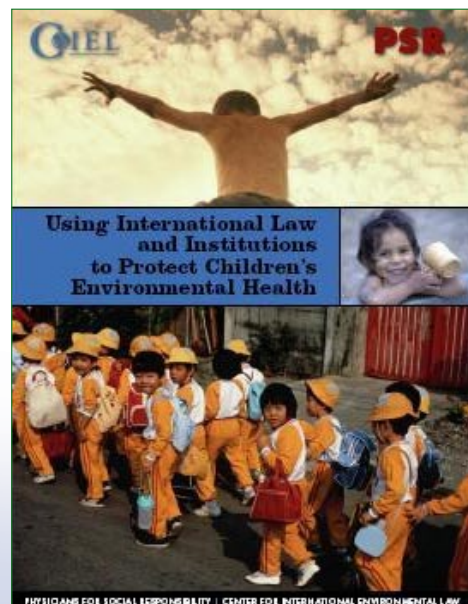
Metal mixtures in mining wastes and children's growth and neurodevelopment
www.hsph.harvard.edu/niehs/children/index.html

and other countries to highlight issues, share tools, and build the political will needed to protect children everywhere.

- **Global Indicators:** Protecting children from exposure to environmental hazards requires that we better understand the relationship between environmental conditions and health outcomes. With EPA's support, the World Health Organization is leading the partnership effort that started at the World Summit on Sustainable Development to create global children's environmental health indicators. In 2005, the Commission on Environmental Cooperation will publish children environmental health indicators for North America. For more information, visit www.who.int/ceh/indicators/en/.
- **International Law:** EPA supported a new publication from the Physicians for Social Responsibility and the Center for International Environmental Law that provides individuals, institutions, and countries with a logical way to address environmental health threats. To read *Using International Law and Institutions*

Protecting Children Beyond Our Borders

Children's environmental health issues span the globe. EPA works with international organizations, nongovernmental organizations,



to *Protect Children's Environmental Health*, visit www.envirohealthaction.org/children/articles.cfm?article_ID=219.

- **Mercury Partnership:** The United Nations Environment Programme (UNEP) agreed to develop and implement partnerships as one approach to reduce the risks to human health and the environment from mercury. EPA is working with other Federal agencies, UNEP, countries, states, industry, environmental groups, and intergovernmental organizations to develop global partnerships in the sectors that represent the majority of all global atmospheric mercury emissions: artisanal and small-scale gold mining; chlor-alkali manufacturing; coal combustion; and products containing mercury; and to research mercury fate and transport. These partnerships are expected to help countries characterize and reduce mercury uses, releases, and exposure. For additional information, reports, and discussion papers visit www.chem.unep.ch/mercury/partnerships/.

- **Indoor Cooking Smoke:** Solid fuels used for indoor cooking threaten the health of children in more than 75 percent of homes in many parts of Africa and Asia. Throughout the world, 1.6 million people, mainly women and children, die each year from breathing the dense smoke from traditional indoor cooking and heating fires. Indoor smoke also makes children under five highly susceptible to respiratory infections in the homes of almost three billion people worldwide where firewood, coal, crop residues, and dung are burned. More than 100 public and private organizations are working together through the EPA-sponsored *Partnership for Clean Indoor Air* to reduce exposure to indoor air pollution from household energy use

for five million people by 2010. To learn more, visit www.PCIAonline.org.

- **Partnership for Clean Fuels and Vehicles:** Motor vehicles account for a significant portion of urban air pollution around the world. EPA is a key partner in the *Partnership for Clean Fuels and Vehicles*, with the goal to eliminate lead in gasoline and reduce sulfur in diesel fuels while adopting cleaner vehicle technologies. For more information, visit www.unep.org/PCFV.

Using Guidance and Regulations to Protect Children

EPA's 1995 policy ensures that we "consistently and explicitly evaluate environmental health risks of infants and children in all risk assessment, risk characterizations and environmental and public health standards that we set for the nation." (EPA, October 20, 1995)

- **Cancer Guidelines:** *Guidelines for Carcinogen Risk and Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens* were issued in March 2005 to assist EPA in assessing the cancer risks resulting from exposure to chemicals or other agents in the environment. The *Supplemental Guidance* describes possible approaches that EPA could use in assessing cancer risks of exposures to children from 0 to 16 years of age, and includes a review of existing scientific literature on chemical effects in animals and humans. Documents and additional information are available at www.epa.gov/cancerguidelines.





- **Clean Air Interstate Rule:** This rule is designed to reduce air pollution that moves across state boundaries in 28 eastern states. EPA estimates that by 2015 this rule will provide health and environmental benefits valued at over 25 times the cost of compliance. When fully implemented, it will reduce SO₂ emissions by over 70 percent and NO_x emissions by over 60 percent from 2003 levels in the affected areas, preventing millions of lost work and school days.
- **Lead in Drinking Water:** EPA is initiating the *Drinking Water Lead Reduction Plan* to strengthen, update, and clarify existing requirements for water utilities and states to test for and reduce lead in drinking water. This action, which follows extensive analysis and assessment of current implementation of these regulations, will tighten requirements related to monitoring, treatment, lead service line management, and customer awareness. The plan also addresses lead in tap water in schools and child care centers.
- **Coke Oven Residual Risk Rule:** EPA issued the first in a series of emission reductions requirements known as residual risk standards, requiring further reductions in emissions of toxic air pollutants from coke ovens. With this action, EPA amended the maximum achievable control technology (MACT) standards to include more stringent requirements to address health risks remaining after implementing EPA's October 1993 air toxic emission standards. The risk assessment conducted for this rule is the first to apply the new Cancer Guidelines and Supplemental Guidance on Early Life Exposures.

Making Schools Healthier

More than 53 million children and almost 3 million adults spend a significant portion of their days in approximately 112,000 public and private school buildings; many of these buildings have environmental conditions that may inhibit learning and pose substantial risks to the health of children and staff.

- **Healthy School Environments**

Assessment Tool: EPA has developed a comprehensive software tool that will help school districts manage self-assessment programs for all of their school facility environmental, health, and safety issues. *The Healthy School Environments Assessment Tool (HealthySEAT)* can be customized to reflect state and local requirements, policies, and priorities, and includes a built-in checklist that reflects the critical elements of every EPA regulatory and voluntary program affecting schools. Using HealthySEAT, school districts will be able to track the status of a virtually unlimited number of school facility conditions, generate a wide range of reports on those conditions, and better manage their resources. For more information visit www.epa.gov/schools.

- **Chemical Cleanout and Prevention**

Program: In 2004, EPA launched the *Schools Chemical Cleanout Campaign* to promote removal of existing stocks of dangerous chemicals from schools and encourage safe chemical management. Ten pilot projects removed over 75,000

pounds of dangerous chemicals and created a safer learning environment for over 400,000 students. In Tennessee, more than 14,000 pounds of dangerous chemicals from 46 schools were removed. Visit www.epa.gov/osw/consERVE/clusters/schools.htm.

- **PEHSU Schools Manual:** The Pediatric Environmental Health Specialty Unit (PEHSU) in Region 4 just released *Safe and Healthy School Environments*, a resource book that applies the methods and perspectives of environmental health to school settings. Visit www.sph.emory.edu/PEHSU/.

- **School Siting:** EPA worked with the Council of Education Facility Planners International to develop *Schools for Successful Communities: An Element of Smart Growth* to explain why and how communities should use smart growth principles to build schools. This publication helps communities invest in schools that will give children the best possible learning environment, use taxpayer dollars wisely, and express the values and vision of the community. For more information, visit www.cefpi.org.

- **Improving the Air in Schools:** Twenty-two percent of our nation's schools have addressed indoor air issues using guidance consistent with the *Indoor Air Quality Tools for Schools (IAQ TFS)* program. This program has been supporting schools for nearly a decade to reduce exposures to indoor environmental contaminants. The core of the program is the *IAQ TFS Kit* which provides best practices, industry guidelines, and practical management actions in a format designed to help school personnel identify, solve, and prevent indoor air quality problems. For more information, visit www.epa.gov/iaq/schools.

- **Indoor Air Quality Tools for Schools**

- **Mentor Network:** The *IAQ TFS Mentor Network* started in 2003 to provide a collaborative forum for school professionals and advocates for healthy indoor school environments to exchange ideas and discuss indoor air quality issues. The Network is a resource for school districts beginning new indoor air management programs. To join the over 50 current members, email guarneiri.michele@epa.gov.

- **Indoor Air Quality Tools for Schools**

- **Awards:** The *IAQ TFS Awards* program provides incentives and public recognition to schools and school districts that consistently implement effective IAQ management practices. More than 250 school districts and school-affiliated organizations have been recognized for outstanding achievement and leadership in improving indoor air quality. Visit www.epa.gov/iaq/schools/awards for information and applications.

- **Asbestos:** The Asbestos Hazard Emergency Response Act (AHERA) requires schools to inspect for asbestos and submit publicly-available management plans to states. EPA has begun to re-educate local education authorities on the Federal requirements for asbestos in schools and AHERA by partnering with the National Parent Teacher Association, the National Education Association, the American Association of School Administrators, and the Department of Education. The Agency is distributing updated outreach materials on asbestos in schools and AHERA compliance and working with other Federal agencies, such as the Bureau of Indian Affairs to distribute information to tribes.



Smart Growth and Children's Health

Urban development that incorporates smart growth principles can provide clear health benefits to children, including improved air and water quality, walkable cities, and preservation of green spaces.

- **Smart Growth Grants:** EPA funded five programs to protect children's health from environmental risks by implementing smart growth principles. These grants included a walkability audit, a safe-routes-to-school program, smart growth and children's health curriculum development, creation of a multi-use path connecting schools and an initiative to eradicate lead hazards from homes. The grants emphasize projects that feature innovative and replicable ideas on smart growth and children's environmental health. Visit www.epa.gov/smartgrowth/grants.

State and Community Actions to Protect Children

EPA works with states in many creative and innovative ways to bolster environmental protections for children's health.

- In EPA Region 10, the Northwest Pediatric Environmental Health Specialty Unit (PEHSU) brought together over 150 health care professionals for an accredited course on *Controversies and Advances in Pediatric Environmental Health*. In 2006, the focus will be on children and pesticides. See the Region 10 PEHSU site at <http://depts.washington.edu/pehsu/index.html>.

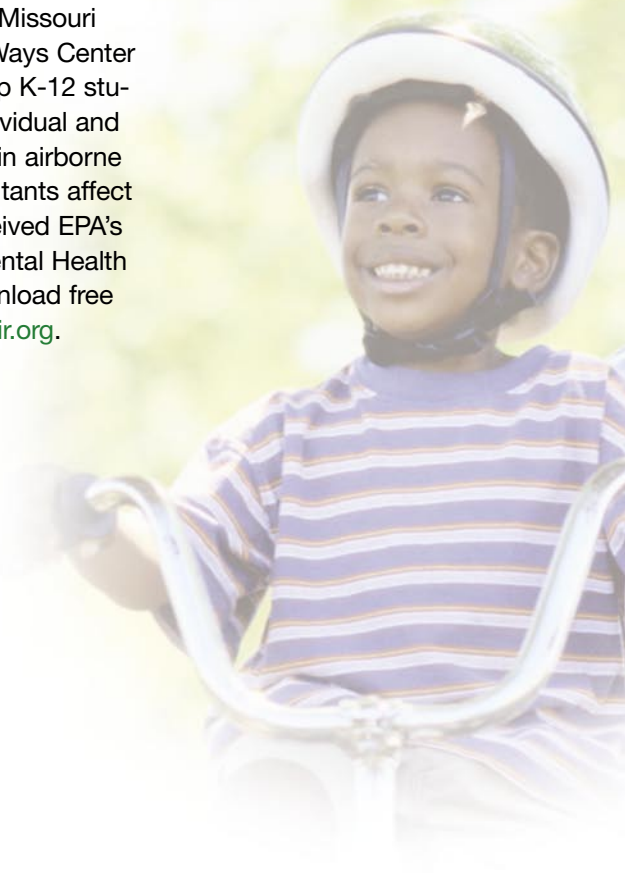
- EPA Region 8, the Rocky Mountain PEHSU, states, universities, medical centers, and local agencies conducted three children's environmental health summits, resulting in many actions. For example, Montana has created a children's environmental health network; Montana and Utah have developed excellent informational web pages; the Utah governor declared October 2004 Children's Health Month; and Colorado, Utah and Wyoming public health and environmental health associations have included children's environmental health issues in their annual conferences. Visit the Rocky Mountain PEHSU site at <http://rnrpehsu.org/> and www.epa.gov/region8/humanhealth/children.
- EPA Region 4, and the U.S. Department of Agriculture Cooperative State Research, Education, and Extension Service, and the 1890 Traditional Black Land Grant Colleges and Universities increased awareness of children's environmental health hazards, reaching over 80 percent of the counties in the Southeast Region and over 17 million people via conferences, health fairs, and media programming. A children's health working group has been established in each of the Region 4 states.
- The Environmental Council of the States and the Association of State and Territorial Health Officials, with support from EPA and the Centers for Disease Control and Prevention, are implementing a national action agenda to reduce environmental triggers of childhood asthma. See *Catching Your Breath: Strategies to Reduce Environmental Factors that Contribute to Asthma in Children* at www.astho.org/pubs/CatchingYourBreathReport.pdf.

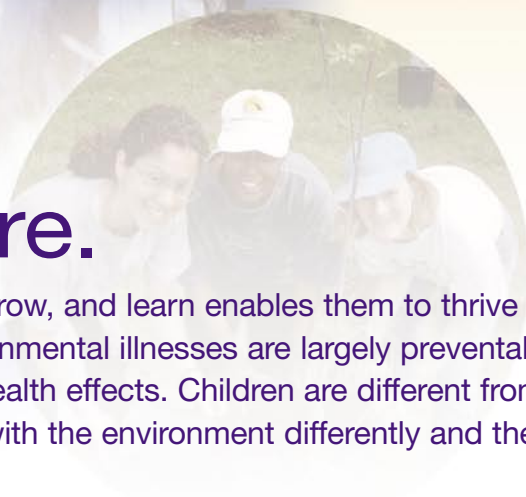
Teaching Children

Children are eager to learn about their environment and their bodies. EPA has materials and programs in place to educate kids about children's environmental health.

- **Resource Booklet for Youth:** *Live, Learn, Play, Tune-In to Your Environment* is a new resource booklet for children from ages 10 to 16. It contains information, illustrations, activities, and music on children's environmental health issues. The booklet is available free at www.epa.gov/ncepihom/ordering.htm
- **Reaching Youth Groups:** EPA Region 4 and the Northwest Georgia Girl Scout Council hosted the Environmental Awareness Day for the last 3 years. More than 50 EPA volunteers developed and ran activities to help more than 700 scouts earn their Eco-Action and Environmental Health Badges. Region 4 has also developed a toolkit to enable others to replicate these activities. EPA's Region 8 and their local Girl Scout Council also sponsor a children's environmental health badge day for girls from 3rd grade to high school.
- **Air Quality Information:** EPA's *Air Quality Kits-To-Go* educate children about air pollution topics. The kits were originally created for agency employees to provide air pollution lessons to local school districts; their popularity drove EPA to develop a national program. Visit www.epa.gov/apti.

- **"In The Air":** EPA and the Missouri Botanical Garden's Earth Ways Center developed materials to help K-12 students understand how individual and collective behaviors result in airborne toxics and how these pollutants affect their health. *In The Air* received EPA's 2005 Children's Environmental Health recognition award. To download free materials, visit www.intheair.org.





Protect Children, Protect Our Future.

Protecting the environments where children live, grow, and learn enables them to thrive and develop into healthy and productive adults. Environmental illnesses are largely preventable, expensive to treat, and often irreversible in their health effects. Children are different from adults, their bodies are developing, they interact with the environment differently and they play closer to many harmful pollutants.

The health of children depends on the quality of their environment. All their environments need to be safe: from the womb to the crib, from home to school, from local communities to global villages.

For more information, visit EPA's Office of Children's Health Protection Web site:
www.epa.gov/children.



Office of Children's
Health Protection

October 2005

EPA 100-F-05-041

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