



October 2004

EPA Celebrates Children's Health Month

Protect Children Where They Live and Learn

This is the theme for EPA's fourth annual celebration of Children's Health Month. Protecting the health of children from environmental risks is fundamental to the mission of the United States Environmental Protection Agency (EPA). Children may be at greater risk from harmful environmental pollutants than adults. Consider that:

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

Because of these characteristics, children may not be sufficiently protected by regulatory standards that are based on risks to adults. EPA has

forged more partnerships and taken increasingly more steps to protect children's environmental health from the variety of contaminants and pollutants that may affect them in the air they breathe, the water they drink, the food they eat, their homes, schools, and playgrounds. Often, we direct our effort to specific pollutants that have been found to cause undue harm to children, such as ultraviolet radiation, mercury, lead, diesel fuel, asbestos, and secondhand smoke. We also target the places where children live, learn, and play, in an effort to ensure prevention of exposure. Here are some highlights of recent work.

Helping Children Breathe Easier

Both indoor and outdoor air pollution can adversely affect children's health. An estimated 6.3 million children under 18 years of age had asthma in 2001. In 1994-96, children with asthma missed approximately 14 million school days per year. Visit www.epa.gov/asthma.

- **Air Quality:** This year, EPA identified new geographic areas that will



Discover the Rewards!

be required to reduce emissions of air pollution to meet the new air quality standards for ozone and fine particles. When met, these standards will prevent millions of missed school days and millions of respiratory symptom days each year in children across the nation.

- **States Asthma Project:**

EPA provided support to the Environmental Council of the States (ECOS) and Association of State and Territorial Health Officials (ASTHO) to develop a national agenda to reduce environmental triggers of childhood asthma. This project brought many state environment and health agencies together for the first time. EPA will award eight more state grants to supplement the five pilots in California, Wisconsin, Wyoming,



Idaho and Oregon. The report is available at www.astho.org/pubs/CatchingYourBreathReport.pdf.

- **Reducing Diesel Emissions:**

The Clean Air Nonroad Diesel Rule will cut emission levels from construction, agricultural, and industrial diesel-powered equipment by more than 90 percent and will remove 99 percent of the sulfur in diesel fuel by 2010, resulting in dramatic reductions in soot from all diesel engines. EPA predicts that when the full inventory of older non-road engines has been replaced, the nonroad diesel program will annually prevent up to 12,000 premature deaths, one million lost work days, 15,000 heart attacks, and 6,000 children's asthma-related emergency room visits.

- **Clean School Bus USA:**

Across the country, 24 million children ride school buses to and from school every day. School buses provide our nation's children with safe and convenient transportation, but the diesel exhaust from school buses poses a health risk,

particularly to children. Clean School Bus USA is an initiative sponsored by the EPA to help communities reduce pollution from school buses by reducing idling time, retrofitting current fleets with new technologies and cleaner fuels, and replacing the oldest buses with new buses that meet more stringent pollution control strategies. In 2004, five million dollars in grants will support school bus retrofits, replacements, and use of clean fuel in 20 projects that will affect 5,000 buses nationwide. Visit www.epa.gov/otaq/schoolbus.

- **Hispanic Outreach:**

Approximately two million Hispanics living in the U.S. have asthma. EPA released a new educational video, *Controlando los Factores del Asma*, to help families in the Hispanic community more effectively manage asthma. The video provides information on how to reduce exposure to indoor and outdoor asthma triggers. To receive a free video, call 1-800-438-4318.

- **Awards Program for Health Plans and Health Care Providers:**

EPA, in partnership with America's Health Insurance Plans (AHIP), launched a national awards program that will recognize outstanding leadership by health plans and health care providers who offer comprehensive asthma management services that address environmental risk factors. AHIP members provide health coverage for nearly 175 million Americans.

Protecting Children from Exposure to Secondhand Smoke

Millions of young children continue to be regularly exposed to secondhand smoke in homes and cars. Secondhand smoke can cause serious health consequences, including respiratory illness, ear infections, and more frequent and severe asthma attacks. More information on smoke-free home activities can be found at www.epa.gov/smokefree.

- **Reaching Vulnerable**

Communities: A national partnership has been created with the Department of Health and Human Services Head Start Bureau to inform parents about the harmful effects of secondhand smoke. The goal of the partnership is to reduce and eliminate children's exposure to secondhand smoke in homes and cars. Also initiated this year is the project "Not in Mama's House," an expansion of a successful California program designed to reduce secondhand smoke exposure in the homes of African-American families.

Protecting Children from Too Much Sun

Children need to be physically active, but also must protect themselves from overexposure to the sun. Sun overexposure can cause serious health effects, including skin cancer, eye damage and cataracts, and immune system suppression. Skin cancer is the most common type of cancer in the United States.



- **SunWise:** The SunWise School Program is an environmental and health education program that aims to teach children and their caregivers how to protect themselves from sun overexposure. Currently over 10,500 schools (up from 7,800 in 2003) in all 50 states, Puerto Rico, and Washington D.C. are registered in the SunWise School Program, which started in 2000. Visit www.epa.gov/sunwise.

Protecting the Water Where Children Play

Good water quality is essential to the health of children, who are vulnerable to pathogens, bacteria, and nitrates in water. There are many sources of contaminants, including agricultural runoff, faulty septic systems, and storm sewers. Visit www.epa.gov/ow.

- **Beach Watch:** This program improves public access to information about the quality of the water at beaches and the health risks associated with swimming in polluted water. EPA's Web site now includes an online directory of information about the water quality at our nation's beaches. Visit www.epa.gov/waterscience/beaches.

- **Clean Waters for Children's Recreation:** EPA, through its National Pollutant Discharge Elimination System permitting program for wet weather sources of pollution, is working to provide cleaner waters for improved recreational opportunities. These wet weather pollution sources create significant amounts of contaminants that can cause illnesses in people who are exposed to them. The risk of illness is greatly increased for young children. Through its permitting program, EPA is requiring that these sources of pollution build controls that will greatly reduce the potential for exposure.

Protecting Children from Lead Poisoning

Childhood lead toxicity has been recognized for at least 100 years. Lead poisoning in children may cause lowered intelligence, impaired language and hearing, hyperactivity, behavioral, and other adverse health outcomes. Approximately 434,000 children in the United States have elevated blood lead levels. EPA celebrates Lead Poisoning Prevention Week from October 24-30, 2004. Visit www.epa.gov/lead.

- **Educational Campaigns:** EPA launched a nationwide campaign with the National Head Start Association to educate parents, teachers, and children about the dangers of lead poisoning. EPA developed a pamphlet and several fact sheets on lead poisoning prevention to be distributed to Head Start centers across the United States.

- **Tribal Outreach:** The Tribal-Based Environmental Protection Consortium in New England developed an educational activity book, "Mother Bear," to teach children about lead poisoning prevention. The stories follow seasonal Native American themes while teaching children about lead hazards and lead safety. The book and accompanying teaching curriculum were distributed to tribal schools throughout the United States.



- **Hispanic Outreach:** EPA and ethnic cultural centers, health clinics, and YMCA/YWCA centers in the greater Los Angeles area, Southern California, and Southern Arizona are providing childhood lead poisoning prevention materials to Hispanic children, who represent 85 percent of the reported cases of lead poisoning in Los Angeles County during the past decade. The Spanish edition of the EPA booklet, "Protect Your Family From Lead in Your Home," is an important tool for reaching Hispanic families. This booklet is also available in English, Vietnamese, Chinese, Russian, and Arabic.

Protecting Children from Mercury

For fetuses, infants, and children, the primary health effects of methylmercury are on neurological development. Even low levels of mercury exposure, which can result from a mother's consumption of fish containing methylmercury, can adversely affect the brain and nervous system. Impacts on memory, attention, language, and other skills have been found in children exposed to moderate levels in the womb. These changes produce learning disabilities in the child. Visit www.epa.gov/mercury.



- **Fish Advisory:** EPA and the Food and Drug Administration issued a joint consumer advisory on methylmercury in fish and shellfish. The advisory is for infants, children, nursing mothers, pregnant women, and women that may become pregnant. It highlights the nutritional value of eating fish and shell fish and advises the previous groups of people to avoid or limit eating some types of fish. Visit www.epa.gov/waterscience/fishadvice/advice.html.

Elemental mercury can be found in fever thermometers and other common household products. When these products are broken, toxic mercury vapors can be released into the air. If these products are discarded improperly in the trash or down the drain, the mercury can contribute to the build up of mercury in fish.

- **Education Campaign:** Giant Foods is conducting a year-long campaign to educate consumers about children's environmental health. One effort focused on the hazards of mercury in common household products. Giant offered discounts for the purchase of digital (and therefore mercury-free) thermometers, created education materials for children, displayed information for adults, and participated in a national radio show to highlight mercury exposure issues.

Keeping Pesticides Away from Children

Children can be exposed to pesticides in their diets, their drinking water, or through activities at home and school. Too much exposure to some pesticides and other chemicals may lead to a variety of adverse health effects, such as acute poisoning, disruption of the hormone and immune systems, respiratory problems, neurological damage, and cancer.

- **Pesticide Registrations:** EPA is continuing to phase out the use of pesticides that do not meet the current strict safety standard that

emphasizes potential health effects to children. For example, the treatment of wood with chromated copper arsenate for residential uses ended in December 2003, and the sale of diazinon, a popular pesticide for outdoor residential use, will end by December 2004. In addition, EPA uses education and enforcement actions to reduce availability and use of illegal, unregistered pesticides such as candy-colored mothballs and unregistered insecticidal chalk.

- **Hispanic Outreach:** Through collaboration with the Hispanic Radio Network, public service announcements were aired on more than 190 radio station affiliates, covering 90 percent of the Hispanic population and reaching more than four million radio listeners throughout the U.S. mainland and Puerto Rico. This campaign focused on protecting children from exposure to pesticides and other potentially harmful household chemicals, emphasized the link between cockroaches and asthma, and provided tips for preventing pest infestations in the home.
- **Educating Kids:** The new activity book, *Join Our Pest Patrol*, filled with word games, puzzles and hands-on projects for kids, was released in January of 2004. The booklet helps kids understand the effect that personal choices regarding pesticide use can have on the environment. It is available at www.epa.gov/oppfead1/cb/csb_page/publications/perstpatrol.pdf.



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 which are old and inadequately maintained, often containing environmental conditions that inhibit learning and pose increased risks to the health of children and staff.

- **Assessing Risks:** EPA is developing a software tool to help school districts identify and prioritize the environmental risks in their schools. School districts may volunteer to participate in the initial pilot effort this spring. For more information, visit www.epa.gov/schools.

- **Lab Cleanout Program:** Existing stocks of outdated, unknown, excessive, or unnecessarily hazardous chemicals are present in many schools. These chemicals can pose safety and health risks to students and staff; and a number of widely reported incidents involving such chemicals have resulted in school closures and costly

clean-ups. The Schools Chemical Clean Out Campaign promotes removal of existing stocks of hazardous chemicals from schools; safe chemical management; and national awareness. Visit www.epa.gov/osw/conserv/clusters/schools.htm.

- **Asbestos in Schools:** Asbestos is a naturally-occurring mineral fiber once used to strengthen and provide heat insulation and fire resistance in building products. It is also a known human carcinogen that can cause serious lung diseases. The updated version of *The ABC's of Asbestos in Schools* is available by calling (202) 554-1404 or through this Web site: www.epa.gov/asbestos/asbestos_in_schools.html. A Spanish translation of *The ABC's of Asbestos in Schools* will be available soon.

- **Pest Management in Schools:** EPA encourages school officials to adopt Integrated Pest Management (IPM) practices to reduce unnecessary pesticide use and exposure. EPA's brochure, *Protecting Children in Schools from Pests and Pesticides*, is available by phone at 1-800-490-9198. For information on starting a program, visit www.epa.gov/pesticides/ipm.

Smart Growth and Children's Environmental Health

Alternative approaches to development can provide clear health benefits to children, including improved air and water quality, re-use of brownfields sites and

preservation of open space. Visit www.epa.gov/smartgrowth to learn more.

- **Creating Smart Growth Schools:** EPA worked with the National Trust for Historic Preservation and Smart Growth America to develop outreach material demonstrating the opportunity for environmentally-responsible school siting. The project included the publication entitled "Build Smart" in the October 2003 American School Board Journal that focuses on building small, community-based schools.
- **School Siting:** The study, *Travel and Environmental Implications of School Siting*, examines the relationship between school locations, the built environment around



schools, how kids get to school, and the impact on air emissions of those travel choices. It shows that school siting and design can affect walking, biking, or driving choices. Visit www.epa.gov/smartgrowth/school_travel.htm.

Increasing Knowledge to Better Protect Children

EPA recognizes that society does not yet have all the answers to questions about the role of environment in children's health. We are working to increase that understanding.

- **Handbook for Pediatric Health Professionals:** EPA supported the publication and distribution of the American Academy of Pediatrics (AAP) *Handbook of Pediatric Environmental Health, 2nd edition*. The Handbook addresses numerous environmental health concerns and can be ordered by calling AAP at (866) 843-2271.

- **National Academy of Sciences (NAS) Evaluation:** An internal review of EPA's practices for assessing chemical toxicity concluded that existing testing guidelines result in numerous gaps, especially with respect to understanding mechanisms of toxicity and possible early life-stage sensitivity. EPA has asked the NAS to assess current approaches to toxicity testing to meet regulatory data needs.



- **Polybrominated diphenyl ethers (PBDE's):** The Agency is developing an action plan for PBDE's, a class of chemicals used as flame-retardants. PBDE's have been in the news because higher than expected levels have been observed in human breast milk and environmental samples, and there is increasing evidence of developmental neurotoxicity. The current work is a follow-up to the recent voluntary phase-out of penta-BDE and octa-BDE by the only US manufacturer.

- **Research Centers:** EPA and the National Institute of Environmental Health Sciences (NIEHS) sponsor Centers of Excellence for Children's Environmental Health and Disease Prevention Research. These centers conduct new research on the role of environmental exposures in the health of children and promote the translation of basic research findings into a heightened awareness among children, their families, and health care practitioners regarding detection, treatment, and prevention of environmentally-related disease and illness.

- **National Children's Study:** This study is being planned to examine the effects of environmental influences on the health and development of more than 100,000 children across the United States. The study is authorized by the Children's Health Act of 2000 and will drive our actions to protect children for decades to come.



- **Pediatric Environmental Health Specialty Units (PEHSUs):** EPA and the Agency for Toxic Substances and Disease Registry of the Department of Health and Human Services established the PEHSUs program as a national resource for pediatricians, other health care providers and the public because most health care providers are not prepared to answer questions about the effects of the environment on children's health. Health care providers need a way to learn about health problems related to the environment in order to meet the needs of the public. PEHSUs aim to: reduce environmental health threats to children; improve access to expertise in pediatric environmental medicine; and strengthen public health prevention capacity. Visit www.atsdr.cdc.gov/child/ochchildhlth.html or www.aoc.org/pesu.htm.

Protecting Children Beyond Our Borders

Children's environmental health issues span the globe and cross political boundaries. EPA works with developing and developed coun-

tries, international organizations and non-governmental organizations to highlight issues and build political will to address these issues. International cooperation and collaboration on children's environmental health continues to build.

• **Global Children's Environmental Health Indicators:**

Protecting children from exposure to environmental hazards requires that we better understand the relationship between environmental conditions and health outcomes. Several recent international agreements have highlighted the need for assessing the state of children's environmental health and monitoring progress and have called for action to develop children's environmental health indicators. With EPA support, the World Health Organization (WHO) is leading the effort to develop global indicators. For more information, see www.who.int/ceh/indicators/en.

• **Children's Exposure to Indoor Cooking Smoke:**

Two billion people, almost half of the world's population, still burn traditional fuels such as firewood, coal, crop residues, and dung indoors for cooking and heating, filling homes with particulate matter and smoke. The World Health Organization estimates that 1.6 million people, mainly women and children, die each year from breathing the dense smoke from traditional cooking and heating fires. In an effort to save lives, over 65 public and private organizations have joined the Partnership for Clean Indoor Air, led by EPA and launched in South Africa in 2002. The Partnership's mission is 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, established at the World Summit on Sustainable Development in Johannesburg, South Africa in 2002. The partnership's goals are to eliminate lead in gasoline and reduce sulfur in diesel and gasoline fuels while concurrently adopting cleaner vehicle technologies. For more information on the Partnership for Clean Fuels and Vehicles, visit www.unep.org/PCFV.

• **Atlas of Children's Environmental Health:**

To illustrate the impact of the environment on children's health, EPA funded an effort by the World Health Organization (WHO) to launch a first-ever "Atlas of Children's Environmental Health and the Environment." Presented at the Fourth European Conference of Health and Environment Ministers in Budapest, Hungary, this book brings together a range of facts about the effects of environmental risks to our children's health, and paints a graphic picture of the hazards we all face and the reasons for over three million annual deaths in children under age five worldwide. Visit the atlas at www.who.int/ceh/publications/atlas/en/index.html.

• **Materials for Health Care Providers:**

EPA supports the World Health Organization to develop a handbook for physicians in developing countries, modeled

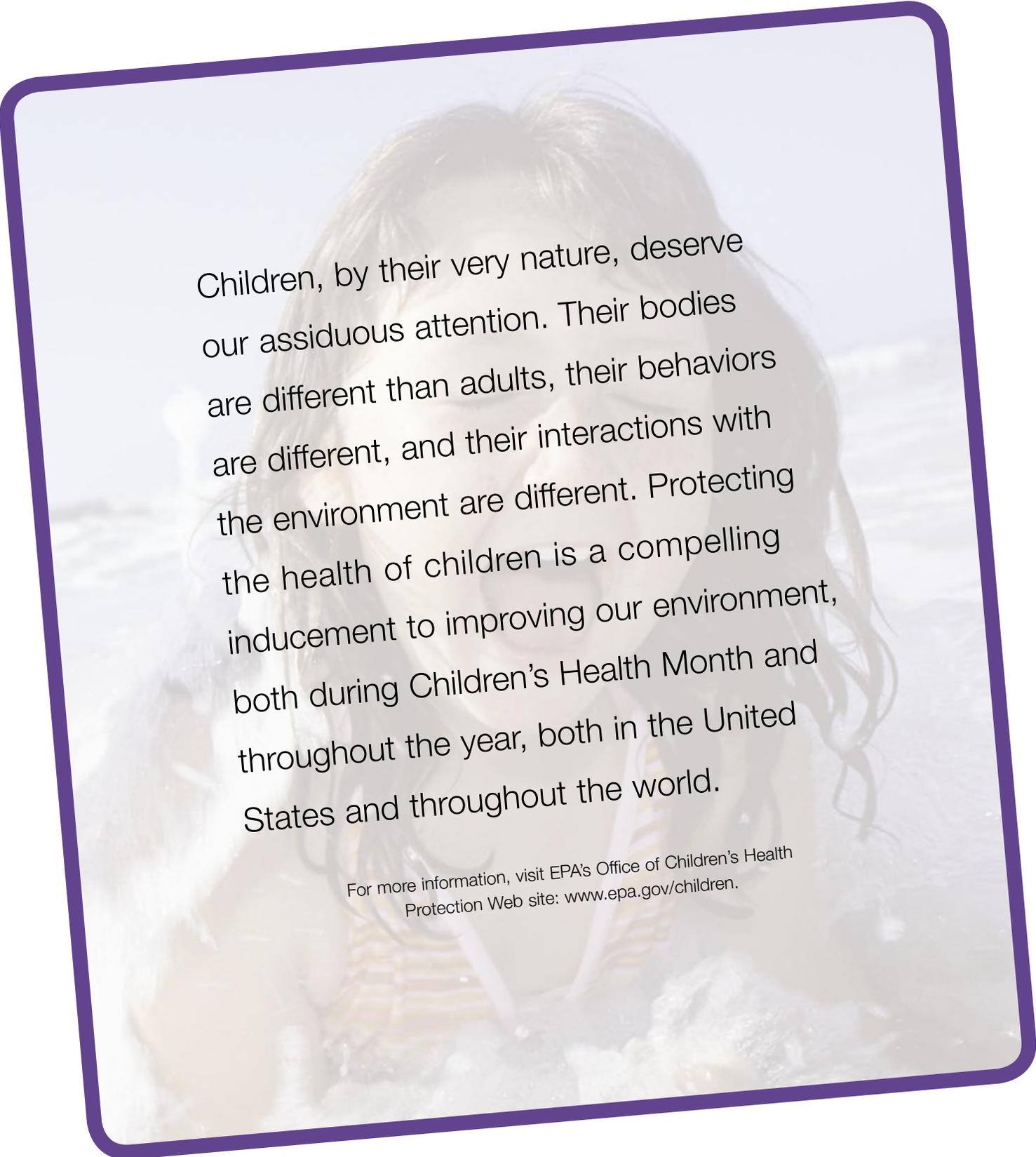
after the American Academy of Pediatrics "Handbook of Pediatric Environmental Health" but adapted and expanded to address issues in developing countries. In addition, pamphlets are being created to address water and sanitation, lead, vector-borne diseases, chemical exposures, air pollution and respiratory diseases. Trainings for health care providers have been organized in India, Thailand, Argentina, and Uruguay. EPA is supporting the International Pediatric Association pre-congress workshop to train up to 100 pediatricians from developing countries on children's environmental health issues.

• **Global Mercury Assessment:**

Because mercury can be transported globally and deposited far from its origin, it is a concern for all countries.



EPA is actively engaged in bilateral, regional and global efforts to better characterize and reduce the adverse impacts of mercury. EPA and the Department of State are providing technical and financial support to the global mercury program under the United Nations Environment Program. Visit www.chem.unep.ch/mercury.



Children, by their very nature, deserve our assiduous attention. 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, both in the United States and throughout the world.

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



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