

---

## Children's Environmental Health International Initiatives

This is an international mailing list provided by [WHO](#) and [UNEP](#) dedicated to promoting healthy environments for children

---

August 2010

### Children's environmental health-from knowledge to action

WHO estimates that up to 25% of the global burden of disease is due to preventable environmental exposures. Children are especially vulnerable because they receive a higher dose than adults, with more extreme consequences. The unborn child's health can also be affected, because the environment can influence gene expression and organogenesis. The burden of disease is unevenly distributed, with greatest exposure to children in developing and low-income countries. While children in such countries still have to cope with traditional threats, including lack of access to safe water, poor sanitation and hygiene, and infectious diseases, they suffer from emerging environmental exposures that threaten their health, such as the effects of rapid globalisation, an upsurge in urbanisation, transboundary chemical transport, and unsustainable consumption.

[Read more information](#)

### CHILDREN'S ENVIRONMENTAL HEALTH NEWS

#### Press Releases

[UNICEF hails new child protection measures by the government of Southern Sudan](#)

UNICEF today welcomed the formation and launch of a Child Protection Unit by the government of Sudan within the Sudan People's Liberation Army (SPLA) as a milestone for the rights of children in the country. The formation of the Child Protection Unit follows an Action Plan signed by the SPLA committing to release all children in its ranks by November 2010 and to end the exploitation of children as soldiers across Southern Sudan. UNICEF (31/8/10)

[Capturing the voices of young people at the World Youth Conference](#)

Engaging with adolescents and young people and discussing pressing issues they face in their lives is the goal of UNICEF's participation in the World Youth Conference in Mexico. UNICEF (26/8/10)

[UNICEF welcomes Angolan Government campaign to reduce maternal and infant mortality](#)

According to the results of a Government survey released this month, Angola has made significant strides towards reducing maternal and infant mortality since 2002, with the mortality rate for children under

## REPORTS AND DOCUMENTS

### [CEC Ministerial Statement](#)

The environment ministers of Canada, Mexico and the United States, as the Council of the Commission for Environmental Cooperation (CEC) presented the proposed Strategic Plan for 2010–2015. The strategy provides clear objectives for results-focused collaboration on three trilateral environmental priorities.

1. Healthy Communities and Ecosystems
2. Climate Change – Low-Carbon Economy
3. Greening the Economy in North America

*To achieve priority 1, the CEC plans to focus its efforts on improving the environmental health of children and other vulnerable communities, increasing the resilience of North America's shared ecosystems, and enhancing environmental and wildlife enforcement and the continental management of chemicals of concern.*

## JOURNAL ARTICLES

### **Air Pollution**

#### [Air pollution exposure during critical time periods in gestation and alterations in cord blood lymphocyte distribution: a cohort of livebirths](#)

Toxic exposures have been shown to influence maturation of the immune system during gestation. This study investigates the association between cord blood lymphocyte proportions and maternal exposure to air pollution during each gestational month. The authors conclude that PAHs and PM2.5 in ambient air may influence fetal immune development via shifts in cord blood lymphocytes distributions. Associations appear to differ by exposure in early versus late gestation. *Environmental Health*

five dropping from 250 to 195 per 1,000 live births. During the same period, the maternal mortality ratio decreased from 1,400 to 660 per 100,000 live births. UNICEF (25/8/10)

### [Young athletes carry the torch for the environment](#)

In recognition of their potential to influence an entire generation of young people, UNEP will be educating talented young athletes at the Games on how they can contribute positively to sustainable development in their communities. UNEP (20/8/10)

### [UNICEF's life-saving operation in Pakistan in jeopardy due to funding shortfall](#)

UNICEF warned today that serious funding shortfalls are jeopardising its humanitarian operation in Pakistan. UNICEF is extremely concerned at the lack of funds for its water and sanitation operation, with millions of children at risk from water-borne diseases. UNICEF (17/8/10)

### [UNICEF sending urgent supplies to women and children affected by Cameroon's worst cholera outbreak in six years](#)

UNICEF has joined WHO, UNFPA, WFP and UNHCR in sending urgently needed supplies to thousands of people affected by Cameroon's worst outbreak of cholera since 2004, but remains deeply concerned about the plight of women and children in the area. UNICEF (10/8/10)

### [WHO responds to health needs in Pakistan floods](#)

The worst floods on record in Pakistan are placing the health of hundreds of thousands of people at risk, with a high threat of waterborne disease outbreaks and immense damage to health facilities.

## Chemicals

### [Adverse effects of methyl mercury: Environmental health research implications](#)

Health effects have been associated with exposure to methylmercury for well over a century. Yet, in the case of a severe neurological disorder known as Minamata disease, public health officials and environmental scientists were slow to make the connection between the appearance of neurological signs and environmental exposure to methylmercury. The authors note that understanding the cause of methylmercury-induced health effects was impaired by a reliance on narrow case definitions and uncertain chemical speciation, and point out that although methylmercury was known to be capable of producing developmental neurotoxicity as early as 1952, researchers did not understand the vulnerability of the developing nervous system to heavy metals such as methylmercury. *Environmental Health Perspectives*

### [Impact of Environmental Chemicals on Lung Development](#)

Disruption of fundamental biological processes and associated signaling events may result in clinically significant alterations in lung development. In utero and early postnatal exposure to environmental agents can influence childhood lung structure and function and may predispose individuals to chronic obstructive lung disease and other disorders later in life; the nutritional and endogenous chemical environment can also affect development of the lung and result in altered function in the adult. Studies now suggest that adverse impacts on the lung may occur after exposure to environmental agents during critical windows of pulmonary development. *Environmental Health Perspectives*

WHO is coordinating the response of health partners and supporting Pakistani authorities by sending medicines and related health supplies capable of treating more than 200 000 people to the affected areas in the northwestern region of the country. WHO (3/8/10)

## In the Media

### [Study: Home Pesticides Linked to Childhood Cancer](#)

A new study of children in the Washington, D.C., area links one form of childhood cancer to exposure to common organophosphate pesticides used around the home to kill bugs. Seattle Post Intelligencer (31/8/10)

### [Millions at risk as crops fail in central Africa](#)

Hundreds of thousands of children across central Africa are at risk of death from starvation and disease after flash flooding worsened an already chronic humanitarian crisis caused by drought. The Independent (29/8/10)

### ['Dozens of children die' in Nigerian lead poisoning](#)

As many as 30 children have died of lead poisoning in northern Nigeria over the past week, authorities believe. Scores of people - mostly children - have already died this year in Zamfara state, poisoned by lead-contaminated waste from illegal gold mining BBC News (27/8/10)

### [The Legacy of Katrina's Kids](#)

The horrors of Hurricane Katrina faded from the headlines—and from many people's minds—long ago. But five years later, its human toll is far from over. Children who experienced Katrina are nearly five times more likely than others to have emotional or behavioral problems, in many cases brought on or exacerbated by

### [Organophosphate Pesticide Exposure and Attention in Young Mexican-American Children](#)

In utero exposure to organophosphate (OP) pesticides has been associated with neurobehavioral deficits in children. The authors investigated whether OP exposure, as measured by maternal urinary dialkyl phosphate (DAP) metabolites during pregnancy, was associated with attention-related outcomes among Mexican-American children living in the agricultural Salinas Valley. The authors reported that in utero DAPs were associated adversely with attention in young children as assessed by maternal report, psychometrician observation, and direct assessment. These associations were more robust at 5 than 3½ years and stronger in boys. *Environmental Health Perspectives*

### [Neurodevelopmental toxicity of prenatal polychlorinated biphenyls \(PCBs\) by chemical structure and activity: a birth cohort study](#)

Polychlorinated biphenyls (PCBs) are ubiquitous environmental toxins. Although there is growing evidence to support an association between PCBs and deficits of neurodevelopment, the specific mechanisms are not well understood. The potentially different roles of specific PCB groups defined by chemical structures or hormonal activities e.g., dioxin-like, non-dioxin like, or anti-estrogenic PCBs, remain unclear. The objective of the study was to examine the association between prenatal exposure to defined subsets of PCBs and neurodevelopment in a cohort of infants in eastern Slovakia enrolled at birth in 2002-2004. The authors report that children with higher prenatal mono-ortho-substituted PCB exposures performed more poorly on the Bayley Scales. They propose that evidence from this and other studies suggests that prenatal dioxin-like PCB

traumatic experiences during the disaster and the long-term instability that followed. *Newsweek* (27/8/10)

### [Lower IQs seen in Mexican girls living near manganese mines.](#)

Higher levels of manganese in hair and blood are associated with lower IQ in children, especially girls, who live near a manganese processing site, finds a study of Mexican children. The children scored lower on a suite of intelligence tests than their counterparts who lived well away from the mining operations. *Environmental Health News* (25/8/10)

### [U.N. fears for children as Pakistan floods threaten town](#)

Flood waters threatened to engulf two towns in southern Pakistan on Saturday, a month after the disaster began, as the United Nations warned that tens of thousands of children risked death from malnutrition. The floods are Pakistan's worst-ever natural disaster in terms of the amount of damage and the number of people affected, with more than six million people forced from their homes. *Reuters* (25/8/10)

### [Health: No chemical romance](#)

Canada and Denmark have banned the use of Bisphenol-A (BPA) in baby bottles, feeding cups and baby food packaging. There is also great concern in both Europe and the United States about its continued use. However, Malaysia is unaware of its effects. According to the Malaysian Plastics Forum, BPA can be excreted quickly from the body, but where is the solid research to prove it? *The Malay Mail* (25/8/10)

### [Niger food hoarding 'puts children at risk'](#)

A food crisis in Niger is being made worse by hoarders who sell grain at prices

exposure, including mono-ortho congeners, may interfere with brain development in utero. *Environmental Health*

[Urinary, Circulating, and Tissue Biomonitoring Studies Indicate Widespread Exposure to Bisphenol A](#)

Bisphenol A (BPA) is one of the highest-volume chemicals produced worldwide, and there is concern that humans may be exposed to concentrations of BPA capable of causing adverse health effects. Toxicokinetic studies in humans suggest that BPA is quickly metabolized in the liver and intestines, thus posing little risk. However, in biomonitoring studies, BPA has been measured in tissues and fluids in individuals exposed to BPA in the environment, suggesting that humans may be at risk due to nonoccupational exposure. The authors reviewed > 80 published human biomonitoring studies that measured BPA concentrations in human tissues, urine, blood, and other fluids, and found that these studies overwhelmingly detected BPA in adults, adolescents, and children. *Environmental Health Perspectives*

[Biomonitoring Studies Should Be Used by Regulatory Agencies to Assess Human Exposure Levels and Safety of Bisphenol A](#)

In 2006, the European Food Safety Authority (EFSA) concluded that “. . . there is very low oral bioavailability of the parent substance, BPA [bisphenol A], in humans and other primates” and that because of the “rapid biotransformation and excretion and plasma protein binding in humans, peak BPA concentrations after dietary exposures to BPA available for receptor binding are predicted to be very low even in worst case exposure scenarios.” In their Commentary,

beyond the reach of most people. Save the Children warns that the practice is putting the lives of hundreds of thousands of children at risk. BBC (21/8/10)

[Prenatal pesticide exposure, ADHD linked](#)

Prenatal exposure to pesticides has been linked to higher rates of attention-deficit hyperactivity disorder symptoms in children. United Press International (20/8/10)

[Under-18 ban 'cut teenage smoking rates'](#)

Teenage smoking rates in England have dropped since the legal age for buying cigarettes rose from 16 to 18, research by University College London suggests. Smoking rates in this age group dropped significantly, from 24% before the law change to about 17% after it. Smoking rates in over 18s remained unchanged. BBC (20/8/10)

[Add diet soda to the list of things to avoid while pregnant](#)

Researchers have added a new item to that list of things to avoid when pregnant - diet soda. The regular consumption of carbonated beverages made with artificial sweeteners significantly increases the risk of preterm delivery (defined as giving birth after fewer than 37 weeks of pregnancy). Los Angeles Times (19/8/10)

[Insecticide to be banned – three decades after tainted melons sickened 2,000 people](#)

Twenty-five years after the worst known outbreak of pesticide poisoning in U.S. history, an agreement is announced that phases out all uses of aldicarb. New EPA documents show that babies and children under 5 can ingest levels of the insecticide through food and drinking water that exceed limits that the agency considers safe. Environmental Health News (18/8/10)

the authors point out that the EFSA relied on two toxicokinetic studies and a limited number of urine biomonitoring studies to draw conclusions about exposure levels in the population, including exposures of neonates. The authors note that the EFSA panel dismissed many biomonitoring studies that documented significant levels of BPA exposure in humans because the studies did not match a preconceived model of BPA metabolism. The authors conclude that models should be developed to explain actual data collected, and that samples from a large number of human subjects clearly indicate that humans are internally exposed to unconjugated BPA. *Environmental Health Perspectives*

### **Water And Sanitation**

[Impact of a City-Wide Sanitation Programme in Northeast Brazil on Intestinal Parasites Infection in Young Children](#) Sanitation affects health, especially of young children. Residents of Salvador, in Northeast Brazil had a high prevalence of intestinal parasites. A city-wide sanitation intervention started in 1996 aimed to raise the level of sewer coverage from 26% to 80% of households. The authors present the results of a study to evaluate the impact of this intervention on the prevalence of *Ascaris lumbricoides*, *Trichuris trichuria* and *Giardia duodenalis* infections in pre-school children. The study demonstrates the impact on intestinal parasites of sanitation improvements implemented at the scale of a large population. *Environmental Health Perspectives*

### **Reproductive Health**

[Body Fatness at Young Ages and Risk of Breast Cancer Throughout Life](#) In this large prospective study, greater body fatness at young ages, particularly during adolescence, was associated with a substantial decrease in breast cancer risk.

### [Asbestos remnants spread under ovals](#)

Excavated soil, from which broken asbestos pieces had been removed by hand, was spread over playing fields at a Catholic high school in Sydney. The Sydney Morning Herald (16/8/10)

### [Call for asbestos education and international trade ban](#)

AUSTRALIAN medical experts have called for more education programs about the risk of asbestos and for the nation to support international bans on asbestos trade. The Courier Mail (16/8/10)

### [Early Puberty in girls doubles in a decade](#)

Twice as many white girls in the US reach puberty aged 7 as a decade ago. No one is sure why this should be the case, but obesity and exposure to chemicals that mimic the female hormone oestrogen are the prime suspects. New Scientist (10/8/10)

### [No smoking in school: China fights against tobacco](#)

In China, tobacco companies sponsor schools. In celebration of Children's Day in June, students from an elementary school were taken on a tour of a cigarette-rolling factory in north-eastern Shenyang. Prominently displayed on the grounds of another school is the slogan: "Talent stems from hard work, tobacco helps you become accomplished." The New Zealand Herald (9/8/10)

### [Child's Play](#)

It is important for eager parents-to-be to give their newborns a head start by creating a safe, healthy and non-toxic heaven, free from hazards, while making a nursery for their future baby. Deccan Herald (6/8/10)

The inverse association was fairly linear, with no apparent threshold. Similar associations were observed for premenopausal and postmenopausal breast cancer, and both were independent of current BMI. The associations were stronger for women who weighed less than 8.5 pounds at birth and for past and current postmenopausal hormone users but did not vary significantly by other factors. *American Journal of Epidemiology*

### [Vaccines less effective in kids exposed to PCBs](#)

Children exposed to PCBs in their first years of life are less likely to develop immunity to disease after they are vaccinated. The study shows that cumulative exposure to environmental PCBs – particularly leading up to 18 months of age – may decrease immune system development, leaving vaccinated children still at risk for developing disease. *Environmental Health News* (6/8/2010)

## UPCOMING EVENTS

### [The 8th Annual Conference on Children's Health and the Environment](#)

Healthy Homes, Healthy Schools  
24 September 2010, Washington DC

### [Children First Symposium](#)

Promoting Ecological Health for the Whole Child  
1 October 2010, University of California, San Francisco

### [The Sixth Biennial Scientific Symposium](#)

Prenatal & Early Life Exposures: How Environmental Toxins Affect the Course of Childhood.  
21-22 October 2010, Space Center Houston, Houston, Texas  
(Registration is Limited to 100 Participants)

### [6th World Environmental Education Congress](#)

19 – 23 July 2011. Brisbane, Queensland, Australia

### [Mother's pregnancy weight linked to child's obesity](#)

A growing number of analyses have found a convincing link among a heavier mother-to-be, increases in her baby's birth weight, and the child's later risk of obesity. And the excess weight has been linked to a range of chronic conditions, including asthma, diabetes and metabolic syndrome (a group of metabolic risk factors). *Scientific American* (5/8/10)

### [The facts about childhood poisoning with home cleaning products](#)

Nearly 12,000 children aged 1-5 went to a hospital emergency room because they drank, touched or were sprayed with household cleaners in a single year. *The Daily Green* (3/8/10)

[Links to past issues and how to subscribe](#)

### Have news for us?

If you would like to submit information to future HECANET issues, email us at [heca@who.int](mailto:heca@who.int) with the subject line "INFORMATION FOR HECANET".

Collated and distributed with the cooperation of the [WHO Collaborating Centre for Children's Environmental Health, Perth, Australia](#) and Children's Health and the Environment Program, QCMRI, Brisbane, Australia