LEAD POISONING IS ENTIRELY PREVENTABLE

Lead poisoning is entirely preventable, yet lead exposure is estimated to account for 0.6% of the global burden of disease, with the highest burden in developing regions. Childhood lead exposure is estimated to contribute to about 600,000 new cases of children with intellectual disabilities every year. Even though there is wide recognition of this problem and many countries have taken action, exposure to lead, particularly in childhood, remains a key concern to health care providers and public health officials worldwide. (Taken directly from WHO website)

The Global Alliance to Eliminate Lead Paint is a cooperative initiative jointly led by the World Health Organization and the United Nations Environment Programme to focus and catalyze the efforts to achieve international goals to prevent children's exposure to lead from paints containing lead and to minimize occupational exposures to lead paint.

Link to the Global Alliance to Eliminate Lead Paint

CHILDREN’S ENVIRONMENTAL HEALTH NEWS

Press Releases
UN to Support China to Phase out Ozone-Depleting Substances, with Major Climate Benefits
China is set to receive funding to eliminate the industrial production of ozone-depleting hydrochlorofluorocarbons (HCFCs) by 2030. HCFCs are also a potent greenhouse gas. UNEP (23/4/13)

Scaled-Up Investments in Sustainable Cities Crucial for Improved Resource Efficiency and Poverty Eradication
Investing in sustainable infrastructures and resource efficient technologies in cities offers a golden opportunity to deliver economic growth with lower rates of environmental degradation, reductions in poverty, cuts in greenhouse gases, and improved well-being, according to a new report released by the United Nations. UNEP (17/4/13)

Progress shows that stunting in children can be defeated
A new UNICEF report issued today offers evidence that real progress is being made in the fight against stunted growth – the hidden face of poverty for 165 million children under the age of five. The report shows that accelerated progress is both
**JOURNAL ARTICLES**

**Air Pollution**

**Gestational Diabetes and Preeclampsia in Association with Air Pollution at Levels below Current Air Quality Guidelines**

The authors investigated whether low-level exposure to air pollution is associated with gestational diabetes and preeclampsia. The results showed that the prevalence of gestational diabetes increased with each nitrogen oxides (NOx) quartile, with an adjusted odds ratio (OR) of 1.69 (95% CI: 1.41, 2.03) for the highest (> 22.7 µg/ m³) compared with the lowest quartile (2.5–8.9 µg/m³) of exposure during the second trimester. The adjusted OR for acquiring preeclampsia after exposure during the third trimester was 1.51 (1.32, 1.73) in the highest quartile of NOx compared with the lowest. Both outcomes were associated with high traffic density, but ORs were significant for gestational diabetes only. They concluded that NOx exposure during pregnancy was associated with gestational diabetes and preeclampsia in an area with air pollution levels below current air quality guidelines. *Environmental Health Perspectives*

**Chemicals**

**Prenatal and Postnatal Bisphenol A Exposure and Body Mass Index in Childhood in the CHAMACOS Cohort**

Bisphenol A (BPA), a widely used endocrine-disrupting chemical, has been associated with increased body weight and fat deposition in rodents. The authors examined whether prenatal and postnatal urinary BPA concentrations were associated with body mass index (BMI), waist circumference, percent body fat, and obesity in 9-year-old children (n = 311) in the CHAMACOS longitudinal cohort study.

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**UN Calls for Accelerated Action with 1,000 Days to Go on Millennium Development Goals**

People around the world invited to join in boosting momentum for most successful global anti-poverty push in history. UNEP (4/4/13)

**World Health Day: Climate and Clean Air Coalition Targets Indoor and Outdoor Air Pollution**

According to the World Health Organization (WHO), the health dangers presented by air pollution are far larger than previously thought. UNEP (7/4/13)

**Reducing Air Pollution, Chemical Coolants Can Quickly Cut Sea-Level Rise**

The damage from rising seas and higher storm surges is one of the most visible and costly effects of climate change. Sea-level rise can be cut significantly by reducing local air pollution from black carbon, methane, and tropospheric ozone, along with factory-made coolants called HFCs. UNEP (14/4/13)

**New plan to address pneumonia and diarrhoea could save 2 million children a year**

A new Global Action Plan launched by the WHO and UNICEF has the potential to save up to 2 million children every year from deaths caused by pneumonia and diarrhoea, some of the leading killers of children under five globally. WHO/UNICEF (12/4/13)

**In the Media**

**Twin study shows environment interacts with genes in autism**

Scientists have found patterns of change possible and necessary. UNICEF (15/4/13)
Consistent with other cross-sectional studies, higher urinary BPA concentrations at 9 years of age were associated with increased adiposity at 9 years. However, increasing BPA concentrations in mothers during pregnancy were associated with decreased BMI, body fat, and overweight/obesity among their daughters at 9 years of age.

*Environmental Health Perspectives*

**Bisphenol A-associated epigenomic changes in prepubescent girls: a cross-sectional study in Gharbiah, Egypt**

The authors conducted an environmental epidemiology study of BPA exposure and CpG methylation in pre-adolescent girls from Gharbiah, Egypt hypothesizing that methylation profiles exhibit exposure-dependent trends. They found that CpG methylation varied widely among girls, and higher urinary BPA concentrations were generally associated with less genomic methylation. Based on pathway analyses, genes exhibiting reduced methylation with increasing urinary BPA were involved in immune function, transport activity, metabolism, and caspase activity. In particular, hypomethylation of CpG targets on chromosome X was associated with higher urinary BPA. Using the Comparative Toxicogenomics Database, the authors identified a number of candidate genes in the sample that previously have been associated with BPA-related expression change. They concluded that the data indicated that BPA may affect human health through specific epigenomic modification of genes in relevant pathways. Thus, epigenetic epidemiology holds promise for the identification of biomarkers from previous exposures and the development of epigenetic-based diagnostic strategies.

*Environmental Health*

in gene activity involved in autism in a study that shed light on how environmental factors can work to turn certain genes on or off and contribute to the development of the brain disorder. *Reuters (23/4/13)*

**BPA levels in fetal livers higher than adult exposures**

A new study shows bisphenol A can cross the placenta and get into the developing livers of fetuses. Eighty percent of the BPA measured in the fetal livers was the more active type of BPA -- free BPA -- which is thought to cause health effects. Results from one of the first studies of its kind show the fetal livers had higher levels than adult livers. *Environmental Health News (18/4/13)*

**Air pollution from China raises mercury levels around Mt. Fuji**

Levels of mercury in the skies around Mount Fuji were found to be 10 times higher than that of the average urban area in 2007, a new survey says. The team learned that the airborne mercury had been carried into Japan by air blowing in through northeastern China and the Korean Peninsula. *Asahi Shimbun (16/4/13)*

**UN puts spotlight on ‘stunted’ kids**

The United Nations Children’s Fund says more than a quarter of children under the age of 5 worldwide are permanently "stunted" from malnutrition, leaving them physically and intellectually weak and representing a scandalous waste of human potential. *Associated Press (16/4/13)*

**Aflatoxin is a silent killer**

Aflatoxin fungus contamination of cereals, dried fruit and nuts can cause liver damage, according to the World Health
Global Change

Managing the Health Effects of Temperature in Response to Climate Change: Challenges Ahead

Background: Although many studies have shown that high temperatures are associated with an increased risk of mortality and morbidity, there has been little research on managing the process of planned adaptation to alleviate the health effects of heat events and climate change. The authors examined how public health organizations should implement adaptation strategies and, second, how to improve the evidence base required to make an economic case for policies that will protect the public's health from heat events and climate change.

Environmental Health Perspectives

Water and Sanitation

Source and Transport of Human Enteric Viruses in Deep Municipal Water Supply Wells

The authors collected a time series of virus samples from six deep municipal water-supply wells. Three of these wells draw water from beneath a regional aquitard, and three draw water from both above and below the aquitard. The authors also sampled a local lake and untreated sewage as potential virus sources. Viruses were detected up to 61 percent of the time in each well sampled, and many groundwater samples were positive for virus infectivity. Lake samples contained viruses over 75 percent of the time. Virus concentrations and serotypes observed varied markedly with time in all samples. Sewage samples were all extremely high in virus concentration. Virus serotypes detected in sewage and groundwater were temporally correlated, suggesting very rapid virus transport, on the order of weeks, from the source(s) to wells. Adenovirus and Organisation. It also exerts an economic toll. A recent World Bank study noted that the European Union regulation on aflatoxins costs Africa $750 million. Ghana News Agency (16/4/13)

Tough planning rules to target contamination

Children's playgrounds, old petrol stations, factories and industrial land will be audited for contamination and hazards under strict new rules to determine risks to health and the environment. Ballarat Courier (15/4/13)

Cleaning up Nigeria’s toxic playgrounds

In a remote region of northern Nigeria the signs of a lead poisoning crisis caused by small-scale gold mining are still visible especially among children, despite a four-year clean-up project. BBC (14/4/13)

U.N. aims to end child deaths from pneumonia, severe diarrhea

Child deaths from pneumonia and severe diarrhea, mainly among the poor in Africa and South Asia, could be virtually eliminated by 2025 under an "integrated" strategy that includes better sanitation and newer vaccines, U.N. agencies said. Reuters (12/4/13)

Pesticide use linked to childhood brain tumours

New Australian research has revealed a possible link between pesticide treatments and brain tumours in children. Australia ABC News (10/4/13)

Chemical in food packaging can harm unborn babies, say French officials

Health authority says BPA, found in bottles, boxes and dental fillings, is linked to breast cancer and behavioural problems. The Guardian (9/4/13)
enterovirus levels in the wells were associated with precipitation events. The most likely source of the viruses in the wells was leakage of untreated sewage from sanitary sewer pipes.

*Environmental Science and Technology*

**Additional Publications**

**E Waste: Solving the e-waste problem (StEP)**

*StEP Green Paper offers key insights into drivers of transboundary e-waste flows*

In her recently published *StEP Green Paper* titled “Transboundary Movements of Discarded Electrical and Electronic Equipment”, Djahane Salehabadi sheds important light on the nature of transboundary e-waste flows and highlights key considerations and challenges related to national and international e-waste policy.

[Link to paper]

*StEP Green Paper provides comprehensive overview of e-waste problem in China*

A huge percentage of the world’s electrical and electronic equipment begins its life in China. What is less widely known is that China is also the end-of-life destination for much of the world’s waste electrical and electronic equipment, commonly known as “e-waste”. As both Chinese and worldwide consumption of electrical and electronic equipment have increased in recent years, so have the environmental and health consequences of its disposal. A new Green Paper titled “E-waste in China: A country report” published by the Solving the E-waste Problem (StEP) Initiative explores and offers key insights into the scale and dynamics of the e-waste problem in China.

[Link to paper]

**When Blood Meets Nitrogen Oxides: Pregnancy Complications and Air Pollution Exposure**

A new study reports an association between exposure to nitrogen oxides (NOₓ) and two pregnancy complications: gestational diabetes and preeclampsia (high blood pressure and protein in the urine). *Environmental Health Perspectives* (9/4/13)

**Consumption Junction: Childhood Obesity Determined Largely by Environmental Factors, Not Genes or Sloth**

In looking for ways to fight childhood obesity, an emerging consensus of literature points to the need to reengineer kids’ environments to change what and how they eat. *Scientific American* (9/4/13)

**State of the Science of Endocrine Disruptors**

It is now impossible to examine an unexposed population anywhere on Earth. *Environmental Health Perspectives, Opinion* (9/4/13)

**Air Pollution Tied to Birth Defects**

Exposure in the first two months of pregnancy to air pollution from traffic sharply increases the risk for birth defects, a new study has found. *New York Times* (8/4/13)

**In China The Kids Aren't Alright**

A new analysis by the Health Effects Institute (HEI) says that nearly 40 percent of the world’s premature deaths attributable to air pollution (1.2 million people) occurred in China. Particulate matter is now the fourth-leading cause of death in China, behind dietary risks, high blood pressure, and smoking. *Huffington Post* (8/4/13)
**StEP Green Paper explores e-waste situation and management possibilities in Ethiopia**


[Link to paper](#)

Note: The StEP Green Paper Series is a publication tool for research findings which meet the core principles of StEP and contribute to its objectives towards solving the e-waste problem. StEP members agreed on this support of the author(s)’ work, but do not necessarily endorse the conclusions made. Hence, StEP Green Papers are not necessarily reflecting a common StEP standpoint.

[Link to StEP publications](#)

**PCBs and PBBs: Polychlorinated biphenyls classified as carcinogenic to humans and polybrominated biphenyls probably carcinogenic to humans.**

In February 2013, 26 experts from 12 countries met at the International Agency for Research on Cancer (IARC), Lyon, France, to reassess the carcinogenicity of polychlorinated biphenyls (PCBs) and polybrominated biphenyls (PBBs). These assessments will be published as volume 107 of the IARC Monographs. [Link to IARC re recent meeting of experts](#)

* Taken directly from *Lancet Oncology*: “On the basis of sufficient evidence of carcinogenicity in humans and experimental animals, the Working Group classified PCBs as carcinogenic to humans (Group 1)”. “On the basis of these

**Lead poisoning toll revised to 1 in 38 young kids**

An estimated 535,000 young children in the United States have harmful levels of lead in their bodies, putting them at risk of lost intelligence, attention disorders and other life-long health problems, according to a new estimate released by federal health officials. USA Today (5/4/13)

**New flammability standard is a win for low-income communities of color**

California’s plan to update its furniture flammability standard is good news for low-income communities of color, which bear a disproportionate burden of the health risks from flame retardants. As evidence of the dangers from exposure to these chemicals accumulates, so too has the evidence that flame retardants in furniture do not make anyone safer from fire. Environmental Health News (3/4/13)

**EPA Chemical Risk Assessment Plan For 2013 to Focus on Flame Retardants**

The Environmental Protection Agency announced plans March 27 to begin full risk assessments on seven chemicals in 2013, including four flame retardants. Bloomberg BNA (1/4/13)

**UPCOMING EVENTS**

**European Congress in Primary Care Paediatrics**
July 3rd – 5th 2013. Tel Aviv, Israel

**International Conference on Mercury as a Global Pollutant**
July 28th – August 2nd 2013, Edinburgh, Scotland

**2013 Pacific Basin Consortium Conference**
September 24th – 27th 2013. Honolulu,
similarities with PCBs, and together with inadequate evidence for carcinogenicity in humans and sufficient evidence in experimental animals, PBBs were upgraded to Group 2A, probably carcinogenic to humans”. Link to Lancet Oncology

Herbicide pollution and Health

The Weed's Network is passionate about a sustainable, viable and creative future in our relationship with weeds. Link to Herbicide pollution and health

Hawaii, United States of America

The Seventh International INCHES Conference
November 20th -22nd 2013. Jerusalem, Israel

Children's Environmental Health Course

Excellence in Pediatrics Conference
December 4th – 7th 2013. Qatar

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Collated and distributed with the cooperation of the Children's Health and the Environment Program, QCMRI, Brisbane, Australia