Employers’ and Workers’ Handbook on Hazardous Child Labour.

The International Labour Organization (ILO) estimates that across the globe there are a total of 115 million children under the age of 18 currently involved in hazardous work. The ILO Bureau for Employers’ Activities and the Bureau for Workers’ Activities have brought attention to this issue by producing the Employers’ and Workers’ Handbook on Hazardous Child Labour.

This Handbook is a useful tool for employers and workers, containing information on hazardous child labour and suggestions for actions that can be taken to safeguard young workers. The Handbook provides an overview of child labour as defined by ILO Conventions. It describes how employers and workers are working jointly to combat hazardous child labour in key sectors, such as agriculture, construction, mining and manufacturing, and makes suggestions on how this cooperation could be strengthened in the future. The suggestions include, for example, the development and implementation of the national hazardous child labour lists, the establishment of workplace safety and health committees and improvements in collective bargaining agreements.

CHILDREN’S ENVIRONMENTAL HEALTH NEWS

Press Releases

Global Organizations to Expand Cooperation on Green Growth for Development

The Global Green Growth Institute, the Organisation for Economic Co-operation and Development, the United Nations Environment Programme, and the World Bank signed a Memorandum of Understanding to create the Green Growth Knowledge Platform, a cutting edge global initiative that will identify and address major knowledge gaps in green growth theory and practice. UNEP (12/1/12)

India records one year without polio cases

India appears to have completed one year without polio since its last case on 13 January 2011. This is a momentous achievement because India was once recognized as the world’s epicentre of polio. However, there remains no room for complacency. India must maintain surveillance and high childhood immunity against wild poliovirus until eradication is achieved globally. WHO (12/1/12)
Most hazardous child labour is found in the agricultural sector but children are in fact working in almost every economic sector, including sectors considered extremely hazardous such as mining and construction.

**JOURNAL ARTICLES**

**Air Pollution**

Traffic-Related Air Toxics and Term Low Birth Weight in Los Angeles County, California

Many studies have linked criteria air pollutants with adverse birth outcomes, but less information is available on the importance of specific emission sources (e.g., traffic) and air toxics. The authors used three exposure data sources to examine odds of term low birth weight (LBW) in Los Angeles, California, women when exposed to high levels of traffic-related air pollutants during pregnancy. The odds of term LBW increased 5% per interquartile range increase in entire pregnancy exposures to several correlated traffic pollutants: land use regression measures of NO, NO\(_2\), and NO\(_x\), elemental carbon (EC), and PM\(_{2.5}\) from diesel and gasoline combustion, and paved road dust (geological PM\(_{2.5}\)). The results provide additional evidence of the potential impact of traffic-related air pollution on fetal growth. The authors suggest that particles from traffic sources should be a focus of future studies.

*Environmental Health Perspectives*

Prenatal Exposure to Residential Air Pollution and Infant Mental Development: Modulation by Antioxidants and Detoxification Factors

The authors assessed whether prenatal exposure to residential air pollution is

Two years after earthquake, little victories for children in Haiti recovery

UNICEF released a report showing that two years after the earthquake that devastated parts of Haiti, the situation for children in the country is slowly improving, though critical challenges remain. According to the report, there is clear evidence of healing and progress for children, particularly in the areas of education, health, nutrition and child protection. UNICEF (9/1/12)

Conflict over, 1.2 million children to return to school in Libya

More than 1.2 million children return to school in Libya, 10 months after evacuating classrooms because of the fighting during the country’s popular uprising. UNICEF (6/1/12)

In the Media

‘Silent Thalidomide’: Thousands of mothers and their daughters at risk of cancer from anti-miscarriage drugs they took decades ago

Tens of thousands of woman could suffer a rare cancer caused by a banned drug taken by their mothers or even grandmothers. London Daily Mail (24/1/12)

Niger struggles to feed itself at the best of times – these are the worst of times

As Niger braces itself for a food emergency after late and erratic rains last year and a surge in food prices, humanitarian agencies are stepping up malnutrition screening so that children receive swift treatment to prevent permanent damage. It is also much less costly. The Guardian (24/1/12)
associated with impaired infant mental development, and whether antioxidant/detoxification factors modulate this association. Pregnant women were recruited during their first trimester. Nitrogen dioxide (NO₂) and benzene were measured with passive samplers covering the study areas. Maternal diet was obtained at the first trimester through a validated food frequency questionnaire. Infant mental development was assessed at approximately 14 months of age using Bayley Scales of Infant Development. Exposure to NO₂ and benzene were not associated with mental development. Inverse associations were estimated for both pollutants among infants whose mothers reported low intakes of fruits/vegetables during pregnancy, with little evidence of associations in the high-intake group. These findings suggest that prenatal exposure to residential air pollutants may adversely affect infant mental development, but potential effects may be limited to infants whose mothers report low antioxidant intakes.

Environmental Health Perspectives

Chemicals

**Associations of Early Childhood Manganese and Lead Coexposure with Neurodevelopment**

The authors prospectively studied whether coexposure to manganese and lead in early childhood is associated with neurodevelopmental deficiencies that are more severe than expected based on effects of exposure to each metal alone. Children in an ongoing longitudinal cohort study (n = 455) were enrolled at birth in Mexico City, provided blood samples, and were followed until 36 months of age. Lead and manganese were measured at 12 and 24 months of age, and neurodevelopment was assessed at 6-month intervals from 12

---

**The Indoor Pollution Threat You May Not Have Known Existed**

“Good Morning America” set out to investigate exactly what kind of threat indoor air pollution posed to the average person by setting up a child’s nursery with a new crib, changing table, rocker and decorations. Seven days of testing later, the results were in. The air in our new nursery contained 300 different chemicals — compared to just two right outside the same house. ABC Good Morning America (19/1/12)

**Agricultural chemicals hurting kids**

A 2006 UNICEF report estimates that 3.3 million children worldwide work in the agricultural sector. Of these, 39% are employed in rice, 54% in tobacco, 48% coffee and 40% in tea enterprises. 17% of working children are exposed to chemical hazards especially in the tobacco enterprise. In rural areas, children work under deplorable hazardous conditions that are detrimental to their physical, mental and social well-being. Kampala Observer (19/1/12)

**Eating mercury-tainted fish affects essential stress hormones in children.**

Eating fish can raise mercury levels that alter hormones and increase chronic stress and immune responses in children, despite the heart benefits of fish consumption. Environmental Health News (19/1/12)

**Gasp, it's worse than we thought**

Air pollution in Hong Kong is more harmful than previously thought, according to a revamped environmental index run by
to 36 months of age using Bayley Scales of Infant Development–II. The authors observed evidence of synergism between lead and manganese; lead toxicity was increased among children with high manganese coexposure. The results of this study highlight the importance of understanding health effects of mixed exposures, particularly during potentially sensitive developmental stages such as early childhood.

*Environmental Health Perspectives*

**Solar UV Doses of Young Americans and Vitamin D3 Production**
Sunlight contains UVB (ultraviolet B) radiation (290–315 nm), which affects human health in both detrimental (skin cancers) and beneficial (vitamin D₃) ways. Based on serum concentrations of 25-hydroxyvitamin D, many Americans < 19 years of age have deficient or insufficient levels of vitamin D₃, indicating that they do not get enough sun exposure. However, other studies have suggested that people make enough vitamin D₃ from their everyday outdoor exposures, even if they diligently use sunscreens with sun protection factor (SPF) 15. The authors estimated how much vitamin D₃ young Americans produce from their everyday outdoor UV doses in the north and south each season of the year with and without vacationing. The authors conclude that most American children may not be getting adequate outdoor UVB exposures to meet their requirements for vitamin D₃.

*Environmental Health Perspectives*

**Occurrence of mental illness following prenatal and early childhood exposure to tetrachloroethylene (PCE)-contaminated drinking water: a retrospective cohort study**
This retrospective cohort study examined whether early life exposure to researchers at the University of Hong Kong, South China Morning Post (18/1/12)

**Nurses’ miscarriages linked to chemicals at work**
A new study reports that nurses who worked with chemotherapy drugs or sterilizing chemicals were twice as likely to have a miscarriage as their colleagues who didn’t handle these materials.

*Reuters Health (14/1/12)*

**Any Lead Is Too Much Lead**
Because many of the effects of lead on young children are irreversible, they have troubling implications for the potential children will reach as adults. While current lead guidelines are based on the premise of a safe threshold, a committee of the Centers for Disease Control says new data has challenged the premise.

*The Atlantic (12/1/12)*

**18% kids have high lead levels in blood**
In India, about 18 per cent of children show unacceptable levels of lead in their blood. Lead poisoning in children has assumed alarming proportions in the absence of a national policy fixing the maximum level for this heavy metal in the blood.

*Deccan Chronicle (11/1/12)*

**Are we programmed to be fat?**
A baby in the womb is exposed to man-made chemicals that may set the child up for obesity later in life.

*Toronto Star (11/1/12)*

**Lower cutoff for lead poisoning raises awareness of how to protect kids from the toxic metal**
tetrachloroethylene (PCE)-contaminated drinking water influenced the occurrence of depression, bipolar disorder, post-traumatic stress disorder, and schizophrenia among adults. A total of 1,512 subjects were studied, including 831 subjects with both prenatal and early childhood PCE exposure and 547 unexposed subjects. No meaningful increases in risk ratios for depression were observed among subjects with prenatal and early childhood exposure. However, subjects with prenatal and early childhood exposure had a 1.8-fold increased risk of bipolar disorder, a 1.5-fold increased risk post-traumatic stress disorder, and a 2.1-fold increased risk of schizophrenia. Further increases in the risk ratio were observed for bipolar disorder and post-traumatic stress disorder among subjects with the highest exposure levels. The results of this study provide evidence against an impact of early life exposure to PCE on the risk of depression. In contrast, the results provide support for an impact of early life exposure on the risk of bipolar disorder and post-traumatic stress disorder. The number of schizophrenia cases was too small to draw reliable conclusions.

Environmental Health

Global Change

Descriptive Review and Evaluation of the Functioning of the International Health Regulations (IHR) Annex 2

The International Health Regulations (IHRs) was developed with the aim of governing international responses to public health risks and emergencies. The document requires all 194 World Health Organization (WHO) Member States to detect, assess, notify and report any potential public health emergency of international concern (PHEIC) under specific timelines. Annex 2 of the IHR outlines decision-making criteria for State-appointed National Focal Points (NFP) to

The risk of lead-based paint from older homes is back in the news, as the government considers tightening the definition of lead poisoning in babies, toddlers and preschoolers. Lower levels than previously thought may harm their developing brains. Associated Press (6/1/12)

Diabetes During Pregnancy May Raise ADHD Risk

Young children are far more likely to experience attention and hyperactivity problems if their mother develops diabetes during pregnancy and they are born into a poor or lower-middle-class household, a new study suggests. Health.com (4/1/12)

Beyond BPA: We need to get tough on toxics

Did you breathe a sigh of relief when Canada became the first jurisdiction in the world to declare bisphenol A toxic in 2010? Or when it banned the chemical in baby bottles, prompting many manufacturers to remove it from their products? If only that were the full story. Globe and Mail (4/1/12)

Top topics of 2011: A nuclear meltdown, fracas over fracking and Keystone, BPA beyond bottles

EHN's roundup of the most important and intriguing topics of 2011 includes issues that exploded onto the media scene as well as those that left their mark quietly. Over the year, the EHN team hand-selected 56,888 articles from media around the world on a wide variety of environmental topics. Environmental Health News (3/1/12)
report potential PHEICs to the WHO, and is a critical component to the effective functioning of the IHRs. The aim of the study was to review and evaluate the functioning of Annex 2 across WHO-reporting States Parties. This evaluation found that the IHR’s Annex 2 is perceived as useful for guiding decisions about notifiability of potential PHEICs. There is scope for the WHO to expand training and guidance on application of the IHR’s Annex 2 to specific contexts. Continued monitoring and evaluation of the functioning of the IHR is imperative to promoting global health security.

Globalization and Health

Reproductive Health

**Air Pollution Exposure During Pregnancy, Ultrasound Measures of Fetal Growth, and Adverse Birth Outcomes: A Prospective Cohort Study**

The authors prospectively evaluated the associations of maternal air pollution exposure with fetal growth characteristics and adverse birth outcomes in 7,772 subjects. They report that NO\textsubscript{2} levels were inversely associated with fetal femur length in the second and third trimesters, and PM\textsubscript{10} and NO\textsubscript{2} levels both were associated with smaller fetal head circumference in the third trimester. Average PM\textsubscript{10} and NO\textsubscript{2} levels during pregnancy were not associated with head circumference and length at birth or neonatally, but were inversely associated with birth weight. Longitudinal analyses showed similar patterns for head circumference and weight, but no associations with length. The third and fourth quartiles of PM\textsubscript{10} exposure were associated with preterm birth. The third quartile of PM\textsubscript{10} exposure, but not the fourth, was associated with small size for gestational age (SGA) at birth. No consistent associations were

Wood stove replacements clear Libby’s air

The replacement of 1,200 wood stoves in Libby with newer, more efficient models has improved air quality, leading to associated health improvements for children in the northwest Montana town, according to a new study. Associated Press (2/1/12)

Can Indoor Swimming Alter Hormones in Boys?

Swimming is generally considered an excellent form of exercise, and indoor swimming is common, especially in winter. However, there is evidence that swimming in a chlorinated indoor pool can cause respiratory irritation or genotoxicity in some people. A recent study suggests another possible consequence: altered levels of hormones in boys. Environmental Health Perspectives (1/1/12)

UPCOMING EVENTS

**15th World Conference on Tobacco or Health**
20-24 March 2012. Singapore

**Environmental Health in the Political Agenda**
22-24 March 2012. Montevideo, Uruguay

In Memory of Dr. Jenny Pronczuk

Pacific Basin Consortium and Environmental Geochemistry and Health
10-13 April 2012. Gwangju, South Korea

PPTOXIII - Prenatal Programming and
observed for NO\textsubscript{2} levels and adverse birth outcomes. These results suggest that maternal air pollution exposure is inversely associated with fetal growth during the second and third trimesters and with weight at birth. PM\textsubscript{10} exposure was positively associated with preterm birth and SGA.

*Environmental Health Perspectives*