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Children's Environmental Health International Initiatives

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dedicated to promoting healthy environments for children

May/June 2025

[Tobacco control efforts protect 6.1 billion people – WHO's new report](#)

The World Health Organization (WHO) today released its report on the Global Tobacco Epidemic 2025 at the World Conference on Tobacco Control in Dublin, warning that action is needed to maintain and accelerate progress in tobacco control as rising industry interference challenges tobacco policies and control efforts.

The report focuses on the six proven WHO MPOWER tobacco control measures to reduce tobacco use, which claims over 7 million lives a year:

- **Monitoring** tobacco use and prevention policies;
- **Protecting** people from tobacco smoke with smoke-free air legislation;
- **Offering** help to quit tobacco use;
- **Warning** about the dangers of tobacco with pack labels and mass media;
- **Enforcing** bans on tobacco advertising, promotion and sponsorship; and
- **Raising** taxes on tobacco.

Since 2007, 155 countries have implemented at least one of the WHO MPOWER tobacco control measures to reduce tobacco use at best-practice level. Today, over 6.1 billion people, three-quarters of the world's population, are protected by at least one such policy, compared to just 1 billion in 2007. While work remains to be done Dr. Tedros Adhanom Ghebreyesus, WHO Director-General emphasize "By uniting science, policy and political will, we can create a world where tobacco no longer claims lives, damages economies or steals futures. Together, we can end the tobacco epidemic."

WHO (23/06/2024)

[World Environment Day 2025 mobilizes commitment, action to end plastic pollution globally](#)

Communities, civil society, businesses, and governments around the world marked World Environment Day on June 5 under the theme #BeatPlasticPollution, with official celebrations held in the Republic of Korea's Jeju Province. Plastic pollution permeates every corner of the planet. By 2040, plastic leakage to the environment is predicted to grow by 50 per cent, and that pollution creeps into our bodies through the food we eat, the water we drink, and even the air that we breathe. World Environment Day 2025 calls for collective action to tackle plastic pollution. It comes exactly two months before countries resume negotiations towards a global treaty to end plastic pollution. The official ceremony for World Environment Day in Jeju, Republic of Korea, highlighted the urgency of ending plastic pollution, a global crisis that affects much of life on Earth. "Governments, businesses, citizens, and the international community alike are all key players in making the circular economy for plastics a reality," Lee Byounghwa, Vice Minister of Environment for the Republic of Korea, said at the official commemoration in Jeju. "Before plastic pollution ends us, we must beat plastic pollution ourselves. Let us set aside the comfort of convenience and start with small actions, together. When everyone acts, change happens." UNICEF (05/06/2025)

Press Releases

[Despite progress, child labour still affects 138 million children globally – ILO, UNICEF](#)

Nearly 138 million children were engaged in child labour in 2024, including around 54 million in

Journal Articles

Air Pollution

[Outdoor residential air pollution exposure and the development of brain volumes across childhood: A longitudinal study](#)

This longitudinal study assessed over 4243 children in the Netherlands to explore whether exposure to traffic-related air pollution affects brain volume development. Researchers estimated exposure to 14 traffic-related pollutants and assessed brain volume through MRI at three timepoints between ages 6 and 17. Air pollution exposure was not associated with changes in white matter, cortical grey matter, and cerebellar volumes. Higher exposure to copper and particulate matter with aerodynamic diameter $<2.5\ \mu\text{m}$ was associated with smaller hippocampal volume at age 8. However, this was followed by a catch-up growth until adolescence with no volume difference remaining at older ages

Environmental Pollution

[Short-term exposure to fine particulate matter and asthma exacerbation: a large population-based case-crossover study in Southern Thailand](#)

This case-crossover study analyzed data from 3504 patients who experienced asthma exacerbation episodes in Songkhla, Thailand, from 2010 to 2023, to investigate short-term effects of fine particulate matter ($\text{PM}_{2.5}$, particles $\leq 2.5\ \mu\text{m}$ in diameter). Although the region generally experiences low air pollution, it is periodically affected by transboundary haze. $\text{PM}_{2.5}$ levels over $50\ \mu\text{g}/\text{m}^3$ were significantly associated with increased odds of asthma exacerbation within one to three days of exposure. Children (6–17 years) exhibited greater susceptibility to asthma exacerbations, showing sensitivity to even low $\text{PM}_{2.5}$ levels ($>15\text{--}25\ \mu\text{g}/\text{m}^3$), particularly at longer time lags. No consistent effects were observed for temperature, but higher humidity was linked to increased risk at several lags.

Environmental Health

[Air Pollution and Autism Spectrum Disorder: Unveiling Multipollutant Risks and Sociodemographic Influences in California](#)

This large population-based study investigated the effects of prenatal and postnatal exposure to fine particulate matter ($\text{PM}_{2.5}$), nitrogen dioxide (NO_2), and ozone (O_3) on autism spectrum disorder (ASD) risk in over 2.37 million births in California (2013–2018). ASD diagnoses were identified through state developmental services

hazardous work likely to jeopardize their health, safety, or development, according to new estimates released today by the International Labour Organization (ILO) and UNICEF. The latest data show a total reduction of over 20 million children since 2020, reversing an alarming spike between 2016 and 2020. Despite this positive trend, the world has missed its target of eliminating child labour by 2025. The report, titled “*Child Labour: Global estimates 2024, trends and the road forward*”, released one day ahead of the World Day Against Child Labour and on International Day of Play, underscores a stark reality that while gains have been made, millions of children are still being denied their right to learn, play, and simply be children.

UNICEF (10/06/2025)

[WHO calls for urgent action to ban flavoured tobacco and nicotine products](#)

On World No Tobacco Day, the World Health Organization (WHO) today launches a [new publication](#) and calls on governments to urgently ban all flavours in tobacco and nicotine products, including cigarettes, pouches, hookahs and e-cigarettes, to protect youth from addiction and disease. Flavours like menthol, bubble gum and cotton candy are masking the harshness of tobacco and nicotine products turning toxic products into youth-friendly bait. Flavours not only make it harder to quit but have also been linked to serious lung diseases. Cigarettes, which still kill up to half of their users, also come in flavours or can have flavours added to them. “Flavours are fuelling a new wave of addiction, and should be banned,” said Dr Tedros Adhanom Ghebreyesus, Director-General of WHO. “They undermine decades of progress in tobacco control. Without bold action, the global tobacco epidemic, already killing around 8 million people each year, will continue to be driven by addiction dressed up with appealing flavours.”

WHO (30/05/2025)

In the Media

[New body aims to limit pollution's deadly toll](#)

Pollution causes millions of deaths annually—6.7 million from air pollution and 5.5 million from lead-related heart disease in 2019 alone. To address this crisis, countries agreed in 2022 to establish a science-policy panel focused on chemicals, waste, and pollution. The panel aims to provide policymakers with integrated, science-based guidance to reduce environmental

up to 2022. Researchers found that both prenatal and postnatal PM_{2.5} were consistently associated with increased ASD risk across multiple models. Postnatal NO₂ was also linked to increased risk, particularly in Black and Hispanic children. Ozone showed inconsistent associations, with some elevated risks during prenatal exposure depending on the model and population subgroup. Sociodemographic factors, including maternal education and neighborhood socioeconomic status, modified the strength of associations, indicating that certain groups may be more vulnerable

Environmental Health Perspectives

[Sensitive periods for exposure to indoor air pollutants and psychosocial factors in association with symptoms of psychopathology at school-age in a South African birth cohort](#)

This South African study followed 599 mother–child pairs to assess how prenatal and early-life exposures to indoor air pollutants (e.g., PM₁₀, CO, toluene) and psychosocial stressors (e.g., maternal depression, alcohol use, intimate partner violence) relate to emotional and behavioral problems at age 6.5. Using linear models and mixture-based methods, prenatal exposure—particularly to PM₁₀, alcohol, and maternal depression—was consistently linked to higher scores on the Child Behavior Checklist. Postnatal exposures showed weaker and less consistent associations. Statistical modeling identified pregnancy as a sensitive period, with joint exposure to pollutants and stress in the prenatal period showing the strongest associations with externalizing problems (e.g., aggression, delinquency, and hyperactivity).

Environmental Pollution

Chemicals/Pesticides

[A Machine Learning-Based Clustering Analysis to Explore Bisphenol A and Phthalate Exposure from Medical Devices in Infants with Congenital Heart Defects](#)

Endocrine-disrupting chemicals such as bisphenol A (BPA) and phthalates can negatively impact growth and development in infants and children. This study investigated the relationship between plastic-containing medical devices and levels of BPA and phthalate in urine samples from infants undergoing cardiac surgery for congenital heart defects. Daily urine samples were collected from 18 infants (<21 days old) at two institutions

and health harms. It will assess issues, identify research gaps, raise awareness, and support communication between scientists and governments. The panel will also conduct horizon scanning for emerging concerns such as microplastics, endocrine-disrupting chemicals, and pharmaceutical pollutants. Discussions to finalize the panel's structure were held in Uruguay in June 2025. The panel will involve governments, scientists, experts, local communities, workers, Indigenous Peoples, and the private sector. It is expected to support existing environmental agreements like the Basel, Rotterdam, Stockholm, and Minamata Conventions, and contribute to efforts addressing climate change and biodiversity loss.

UNEP (12/06/2025)

[Scientists find toxic metals linked to autism in popular toothpaste](#)

A new investigation has uncovered toxic heavy metals in some of America's most trusted toothpaste brands, including those made for children. Lead Safe Mama, a small business focused on lead-poisoning prevention, sent 51 toothpaste products to an independent lab for testing, including Crest, Colgate, Sensodyne, and Orajel. A staggering 90 percent tested positive for lead, 65 percent contained arsenic, 47 percent had mercury and 35 percent were found to have cadmium. All four of these substances are known neurotoxins, capable of damaging brain cells and affecting cognitive development at certain levels. Beyond neurological effects, exposure to heavy metals has also been associated with cancer, kidney disease, birth defects, and cardiovascular dysfunction. None of the tested products exceeded the Food and Drug Administration's (FDA) limits for exposure to these toxins, though two did exceed the Environmental Protection Agency's (EPA) limit, which is based on wastewater levels. Still, there is concern since these metals can easily enter the body not only through ingestion, but also through skin absorption or by being inhaled.

Daily Mail (14/05/2025)

[Early air pollution exposure affects health in adolescence, study finds](#)

Young children who are exposed to high levels of air pollution are more likely to experience poor health outcomes in later adolescence, according to new research. The study, conducted by academics at University College London, looked at data from 9,000 young people taking part in the

in the United States. All infants had an expected cardiopulmonary bypass operation at 44 weeks post-conception or younger. Utilizing a machine learning approach, the study identified that extracorporeal membrane oxygenation (ECMO) use demonstrated elevated levels of urinary BPA and di(2-ethylhexyl) phthalate (DEHP). Furthermore, levels were influenced by the intensity and duration of device use, as well as the number of medical devices used. While most levels remained below existing safety guidelines, peak values in some cases were concerning.

Environmental Health Perspectives

Heavy Metals/Trace Elements

[Prenatal mercury exposure and body mass index at 2 and 4 years: The Japan Environment and Children's Study](#)

This study investigated the effects of prenatal exposure to methylmercury (MeHg) and inorganic mercury (IHg) on body mass index (BMI) in early childhood using data from over 3147 mother-child pairs in Japan. Mercury levels were measured in cord blood at birth, and BMI z-scores were assessed at ages 2 and 4. After adjusting for maternal and dietary factors, IHg — but not MeHg — was associated with a small but statistically significant increase in BMI z-scores at both ages of 0.05 (95% CI: 0.01, 0.09; $p = 0.021$). However, the increase was below thresholds considered clinically meaningful. There was also a significant association between IHg and risk of overweight/obesity at age 2, but not at age 4. No consistent findings were observed for MeHg.

International Journal of Hygiene and Environmental Health

Water, Sanitation & Hygiene

[Public Water Arsenic and Birth Outcomes in the Environmental Influences on Child Health Outcomes Cohort](#)

Inorganic arsenic is associated with adverse birth outcomes, but evidence is limited for public water concentrations (modifiable by federal regulatory action) in US populations. The authors evaluated the association between prenatal public water arsenic exposure below the federal regulatory standard of 10 µg/L and birth outcomes in the US. Observational pregnancy cohort data from the Environmental Influences on Child Health Outcomes (ECHO) Cohort for birthing parent–infant dyads from 35 pregnancy cohort

Millennium Cohort Study born between 2000 and 2002 across the UK, measuring their exposure to various types of air pollutants including PM_{2.5}, PM₁₀ and NO₂.

The results found that adolescents who lived in polluted areas during early childhood, aged two to four, had a risk up to a third higher of reporting worse health at age 17. The study also found that children from ethnic minority backgrounds and deprived neighbourhoods tended to be exposed to higher levels of air pollution, resulting in them being more likely to experience poorer health and chronic conditions.

The Guardian (14/05/2025)

[Green space exposure tied to beneficial brain development in early adolescence](#)

Researchers have found that green space exposure is associated with widespread patterns of structural brain development during early adolescence, which in turn are associated with better academic and mental outcomes. The findings of the study in *Biological Psychiatry* emphasize the need to integrate natural environments into urban and educational settings and provide key insights for policymakers, parents, and educators to support adolescent well-being. This is the first study to examine the influence of green space exposure on structural neurodevelopmental trajectories and which tests whether these trajectories mediate the relationship between green space exposure and positive academic or mental health outcomes.

Medical Express (03/06/2025)

[Nearly 100 countries call for ambitious global treaty to end plastic pollution at UN ocean summit](#)

Ministers and representatives from more than 95 countries called for an ambitious agreement from global plastics treaty negotiations at the UN Ocean Conference (UNOC). Negotiations for the UN plastics treaty collapsed in late 2024 with nations unable to agree on how best to stop millions of tonnes of plastic from entering the environment each year. The next round of negotiations is due to resume in Geneva, Switzerland, in August. The declaration, dubbed the 'Nice Wake-Up Call', identifies five elements that the signatories say are key to achieving a global agreement that is "commensurate with what science tells us and our citizens are calling for". They include a full lifecycle approach, including: plastic production, phasing out chemicals of concern and problematic products, improvements to product design, effective means

sites was analysed. Infants were born between 2005 and 2020. The found that higher prenatal public water arsenic levels were associated with lower mean birth weight and birth weight-for-gestational age z score and a higher risk of low birth weight. Associations were modified by race and ethnicity. Public water arsenic exposure is associated with adverse birth outcomes, even at levels below the current US Environmental Protection Agency maximum contaminant level.

JAMA Network Open

Maternal/Reproductive Health

[Periconception bisphenol and phthalate concentrations in women and men, time to pregnancy, and risk of miscarriage](#)

There is concern that exposure to endocrine-disrupting chemicals such as bisphenols and phthalates might lead to adverse fertility and early pregnancy outcomes. Urinary phthalate and bisphenol concentrations were assessed in the preconception period (938 women), defined as the period in which couples were actively trying to conceive, and early pregnancy (1,366 women and 1,202 men, mean gestational age at sampling 8·6 weeks). Time to pregnancy and miscarriage were assessed using questionnaires and ultrasounds. Preconception and early pregnancy exposure to bisphenols and phthalates may affect couple fertility.

Environmental Research

Climate Change

[Extreme temperatures amplify air pollution risks to childhood respiratory health in school environment in Jiangsu province, China](#)

Exposure to air pollution and temperature extremes can negatively impact respiratory health, especially in children. This study explored how fine particulate matter (PM₁) and temperature interact to affect school-aged children's illness-related absences in Jiangsu Province, China. While using a spatiotemporal multi-city design, over 265,000 pneumonia/tracheitis cases from 2016 to 2021 in children were analyzed. The results showed that higher exposure to PM₁ increased the risk of respiratory illness-related absences. Temperature also played a role, with cold conditions amplifying the adverse effects of pollution in urban schools and heat worsening health outcomes in rural areas. Boys experienced more immediate effects,

of implementation, and incorporating provisions that will allow for a treaty that can evolve.

EuroNews (11/06/2025)

[These foods are new to the 'dirty dozen' list of those with pesticide residue](#)

According to new research from Environmental Working Group (EWG), more than 17% of non-organic fresh produce sold to Americans contains the residues of harmful pesticides. EWG has released its 2024 "Dirty Dozen" list, highlighting fruits and vegetables most likely to contain pesticide residue. The advocacy group recommends that shoppers select organic versions of items on the list. Spinach, strawberries, leafy greens (kale, collard, and mustard greens), grapes, peaches, cherries, nectarines, pears, apples, and blueberries are returning to the list. New additions to the list are blackberries and potatoes.

The Independent (11/06/2025)

[Exposure to particulate matter during pregnancy linked to increased risk of childhood obesity](#)

Exposure to air pollution during pregnancy, specifically to fine particulate matter (PM_{2.5}), may increase the risk of childhood overweight or obesity. This is the conclusion of a large, pan-European meta-analysis study led by the Barcelona Institute for Global Health (ISGlobal) and published in *Environment International*. Data were collected from mothers and children from 10 birth cohorts in eight European countries. The research team calculated pregnancy and annual average concentrations of nitrogen dioxide (NO₂) and fine particulate matter (PM_{2.5}) at the family's place of residence. Then, cohort-specific associations between air pollution exposure and childhood obesity outcomes were estimated and pooled together in a meta-analysis of all cohorts. The study found that exposure to higher levels of PM_{2.5} during pregnancy was associated with a 23% increased risk of childhood overweight or obesity.

Medical Express (26/06/2025)

[Extreme heat has schools in Ontario, Quebec straining to keep kids cool as year winds down](#)

The hot, muggy weather across much of Ontario and southwestern Quebec is dragging down the final days of school for Scarlett Rabideau. "It's really hot, and they don't have any air conditioning inside, only at the library," the Grade 2 student said in Toronto. Heat events aren't unusual in late June or the beginning of July, but the intensity of

while girls showed a delayed response over 10–14 days. The combined exposure to air pollution and extreme temperatures posed a significant health risk to children in both urban and rural settings. The study highlights the need for early warning systems, improved ventilation in schools, and green space expansion to reduce exposure and protect vulnerable child populations.

Communications Earth & Environment

CEH Education and Policy

[Knowledge, awareness, and practice \(KAP\) of Thai paediatricians in their child advocacy role regarding the health effects of particulate matter on children](#)

The aim of this study was to evaluate Thai paediatricians understanding of fine particle matter (PM_{2.5}) and its effects on child health, focusing knowledge, awareness and practice (KAP) in this field. A survey was conducted among 399 paediatricians recruited nationwide to evaluate their KAP of (PM_{2.5}). High general awareness and knowledge of the effects of PM_{2.5} effects on children's health was observed in the study, however, knowledge of other health implications, such as cancer and birth defects, was lacking. Although the majority of participants acknowledged their responsibility in advocating for PM_{2.5} protection, 40.6% expressed a lack of trust in their ability to inform the public about the risks. Paediatricians working in community hospitals displayed lower levels of knowledge and awareness. Older age was associated with communication confidence but inversely related to preventive practices. This shows a need for targeted educational interventions and training to improve paediatricians' capacity to effectively communicate and advocate.

Environmental Advances

[Modeling environmental interactions and collaborative interventions for childhood stunting: A case from Indonesia](#)

Child stunting is a serious health issue caused by chronic malnutrition that affects children's development. Researchers in Indonesia spoke with 60 individuals in high stunting regions to understand how government sectors are collaborating to tackle the problem. Through RAN-PASTI, a unified plan, Indonesia coordinates efforts across public infrastructure. The study found that reducing stunting is most effective when these sectors work closely together, when communities are actively involved, and when

what Ontario and Quebec are seeing now is exceptional, with areas of Central Canada feeling like 40 C to 45 C. This past spring, the Canadian Partnership for Children's Health and Environment (CPCHE), a national umbrella group, highlighted the impacts of extreme heat for children in learning environments like schools and daycares. When indoor temperatures climb past the recommended maximum of 26 C, there are increased health risks, which can impact children quickly. Younger students are also less likely to notice heat-related symptoms or dehydration. And being too hot can simply make it harder to learn. With its partners, the CPCHE recommended establishing a maximum indoor temperature threshold of 26 C, as well as a host of measures. They include improved data collection and monitoring of temperatures in schools and daycares, installing or upgrading HVAC systems to maintain that maximum temperature and endorsing more energy-efficient and passive cooling measures, along with outdoor greening (like more trees, natural ground cover and shade structures). "This isn't just about comfort. It's about protecting the health, safety, and future of every child in Canada," Erica Phipps, the group's executive director, said. CBC (23/06/2023)

[Exposure to 'forever chemicals' before birth linked to higher blood pressure in kids](#)

Per- and polyfluoroalkyl substances (PFAS) -- toxic chemicals found in products like nonstick pans and personal care items -- can linger in the body for up to 20 years, earning them the nickname "forever chemicals," professor and lead study author Mingyu Zhang of Harvard Medical School told ABC News. In this new study, Zhang and his team found that when babies were exposed in the womb to specific types of forever chemicals -- PFDeA, PFNA, and PFUnA -- they had higher systolic blood pressure (the top number in a blood pressure reading) later in life, possibly because these chemicals can cross the placenta during pregnancy and affect early development. Zhang said that these findings matter because children with high blood pressure are much more likely to carry it into adulthood, raising their long-term risk for heart disease, stroke, and kidney problems. Early-life blood pressure patterns can set the stage for serious health issues later on, he noted. ABC News (12/06/2025)

technology is used to monitor progress. However, challenges remain. In some regions, there aren't enough trained professionals or adequate resources to support these efforts. Adopting healthier habits can also be challenging due to deeply ingrained cultural customs surrounding child feeding. The study emphasizes that enhancing children's health involves more than just diet. Healthy development is greatly aided by a child's environment, availability of clean water, good sanitation, and a consistent supply of wholesome food.

Dialogues in Health

Webinars and Events

[ECHO Symposium: Translating Science to Action \(virtual and Bethesda, MD\)](#)

September 15 at 9 am ET | National Institutes of Health

Meetings

[2025 Global Conference on Climate and Health](#)

29 – 31 July 2025

International Convention Center of Brazil, Brasilia (in-person), Brazil

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