

May 2018



CNHHE News



Summer, that brief season of holidays by water and outdoor gatherings of family and friends, is almost here! We do hope that you, for at least a short time, will be able to let go of your cares about environmental health matters and savour some fun and relaxation with those you love.

Before you go, however, we ask that you take a couple of minutes to sign the [petition](#) initiated by Kerry Mueller MP from Waterloo, Ontario, that calls upon the House of Commons *to pass legislation to modernize the Canadian Environmental Protection Act, 1999 (CEPA) without delay, including (i) stronger protections from toxic exposures, (ii) enforceable national air quality standards, (iii) recognition of the basic human right to a healthy environment, as well as adequate protection for vulnerable populations.*

The House of Commons Standing Committee on Environment and Sustainable Development, which completed a year-long study of CEPA in June 2017, made 87 recommendations for the reformation of CEPA. As this Act is Canada's main law governing pollution prevention and the management of toxic chemicals, please add your voice to their requests. More information can be found below and through the link.

Although the petition is open for signatures until September, the environmental health NGOs who have been working hard on this issue feel it is imperative for us to show our support sooner rather than later.

On a staffing note, we at the New Brunswick Lung Association are very sorry to say, (we hope a temporary) "Goodbye" and huge "Thank You" to Jane Percy who is leaving. At the same time we welcome Abby Donnelly to this file as its Assistant Project Manager. You will be hearing from her in the future.

[Chemicals Management Plan \(CMP\) News:](#)

A Subset of Inorganic and Organometallic Substances

- [A proposed Chemicals Management Plan Approach for a Subset of Inorganic and Organometallic Substances](#) was published for a 60-day public comment period ending on June 19, 2018.

Organic Peroxides Group

- The [Draft Screening Assessment for the Organic Peroxides Group](#) was published for a 60-day public comment period ending on June 27, 2018.

Regulations Repealing the Chlor-Alkali Mercury Release Regulations

- [The proposed Regulations Repealing the Chlor-Alkali Mercury Release Regulations made under the Canadian Environmental Protection Act, 1999](#) were published for a 60-day public comment period ending on June 27, 2018.

Ecological risk classification of inorganic substances

- [The Science Approach Document for the Ecological Risk Classification of Inorganic Substances](#) was published for a 60-day public comment period ending on July 11, 2018.

Macrocyclic Lactones and Ketones, Ionones and Cyclohexanone Group

- [The Draft Screening Assessment for Macrocyclic Lactones and Ketones, Ionones and Cyclohexanone Group](#) was published for a 60-day public comment period ending on July 18, 2018.

EDTA and its Salts Group

- [The Final Screening Assessment for the EDTA and its Salts Group](#) was published.

Chemicals Management Plan Stakeholder Advisory Council

- [The Chemicals Management Plan Stakeholder Advisory Council summary report](#) for the November 2017 meeting was published.

Notice of the publication of the Microbial Identification Framework for Risk Assessment

- The Microbial Identification Framework for Risk Assessment (MIFRA) provides guidance on the information required for identifying micro-organisms notified under the New Substances Notification Regulations (Organisms). It is a detailed technical document intended to help notifiers with the choice of methodology and the analysis of scientific data required for adequate microbial identification.

The MIFRA is available at:

<https://www.canada.ca/en/environment-climate-change/services/managing-pollution/evaluating-new-substances/biotechnology-living-organisms/microbial-identification-framework-risk-assessment.html>

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Other Opportunities and Information:

[E-1659 \(ENVIRONMENTAL POLLUTION\) - CEPA Petition](#)

42nd Parliament, *Initiated by Kerry Mueller from Waterloo, Ontario, on May 10, 2018, at 1:05 p.m. (EDT)*

The Petition is open for signature until September 7, 2018, at 1:05 p.m. (EDT)

PETITION TO THE HOUSE OF COMMONS

Whereas:

- The Canadian Environmental Protection Act, 1999 (CEPA) is Canada's main law governing pollution prevention and the management of toxic chemicals;
- Scientific understanding of environmental and health risks of exposure to toxics and pollution has evolved since CEPA was passed in 1999, and CEPA is largely failing to address today's sources of toxic exposure;
- The House of Commons Standing Committee on Environment and Sustainable Development completed a year-long study of CEPA in June 2017. The Committee's report, entitled, "Healthy Environment, Healthy Canadians, Healthy Economy: Strengthening the Canadian Environmental Protection Act, 1999", made 87 recommendations to strengthen and modernize the Act; and
- In February 2018, more than 500 Canadian scientists and public health professionals wrote to the Prime Minister in support of the Standing Committee's recommendations, stating: "Canada has a serious pollution problem that is a threat to both human health and the quality of our environment."

We, the undersigned, **citizens and residents of Canada**, call upon the **House of Commons** to pass legislation to modernize the Canadian Environmental Protection Act, 1999 (CEPA) without delay, including (i) stronger protections from toxic exposures, (ii) enforceable national air quality standards, (iii) recognition of the basic human right to a healthy environment, as well as adequate protection for vulnerable populations.

[Sign the Petition](#)

[Asthma Canada](#)

2018 Graduate Student Research Award Applications Now Open!

Asthma Canada, in partnership with AllerGen NCE Inc., is excited to announce that we are now accepting applications for our [National Research Program's](#) Graduate Student Research Awards. Launched last year, the Asthma Canada-AllerGen NCE Graduate Student Research Awards recognized three outstanding emerging researchers in 2017.

This year, the [2018 Student Research Awards](#) will grant three awards valued at \$10,000 each to Masters level (MSc/MScN) student researchers; and two awards valued at \$20,000 each to PhD level student researchers conducting innovative research in early-onset and late-onset asthma.



The Goren Enhorning Graduate Student Research Awards supports research for early-onset asthma and the Bastable-Potts Graduate Research Awards supports research for late-onset asthma.

We invite applicable graduate student researchers to respond to our [Call for Proposals](#) and [Application](#). The application deadline is Friday, June 29, 2018 (by 8 pm in the applicant's local time zone). We look forward to hearing from you!

For more information contact:

Mehnaz Rahman

Manager, Programs and Services, Asthma Canada

mehnaz.rahman@asthma.ca

416-787-4050 x112

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[Collaborative on Health and the Environment](#)

Webinar: [Does Early Bisphenol A Exposure Cause Hyperactivity in Children? A Systematic Review](#)

The webinar took place on May 16, 2018. Access the recorded presentation in the call and webinar archive: <https://www.healthandenvironment.org/our-work/webinars/>

Attention-deficit hyperactivity disorder (ADHD) has increased in prevalence in the past decade. Studies attempting to identify a specific genetic component have not been able to account for much of the heritability of ADHD, indicating there may be gene-environment interactions underlying the disorder, including early exposure to environmental chemicals. Based on several relevant studies, The Endocrine Disruption Exchange (TEDX) chose to [examine bisphenol A \(BPA\) as a possible contributor to ADHD in humans](#). BPA is a widespread environmental chemical that has been shown to disrupt neurodevelopment in rodents and humans.

TEDX used the Office of Health Assessment and Translation (OHAT) framework, a novel systematic review framework, as well as meta-analysis to determine the relationship between early life exposure to BPA and hyperactivity, a key diagnostic criterion of ADHD.

This talk will describe how, by integrating animal and human data, a hazard conclusion regarding the effects of early BPA exposure on hyperactivity in children can be reached.

Featured Speaker



Jo Rochester, PhD, is a Senior Scientist at The Endocrine Disruption Exchange, and has worked at TEDX since 2012. She has expertise in physiology, endocrine disruption, and systematic review. She currently uses systematic review techniques to explore the relationship between synthetic chemicals and human health. Jo has authored several papers on the health effects of bisphenol A and its alternatives.

As a post-doctoral fellow at the University of Colorado, Jo studied the effects of social cues on brain hormones in rodents, and the implications for human reproductive health. Before that, she studied the effect of

endocrine disruptors in birds at the University of California, Davis, where she received her BS, MS, and PhD.

This webinar is one in a monthly series sponsored by the Collaborative on Health and the Environment's EDC Strategies Partnership. The CHE EDC Strategies Partnership is chaired by Carol Kwiatkowski ([TEDX](#)), Sharyle Patton ([Commonweal](#)), Jerry Heindel ([Commonweal](#)), and Genon Jensen ([HEAL](#)). To see a full list of past calls and webinars related to EDCs and listen or view recordings, please visit our [partnerships](#) page.

This webinar was moderated by **Jerry Heindel, PhD**, director of Commonweal's Program in Endocrine Disruption Strategies. It lasted for 30 minutes and was recorded for our call and [webinar archive](#).

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[Greenpeace Canada](#)

[Greenpeace's new 'open' project & your plastic-free future toolkit!](#)

Earth Day 2018's theme is to End Plastic Pollution, and Greenpeace Canada is rising to the challenge with the launch of our brand new project that's a bit different from the way we usually tackle environmental problems. Because plastic has not only consumed our daily lives but has sadly increasingly consumed our waterways, oceans, landscapes and communities, we need to approach this problem in a way that mirrors its scale and reach.

And here's how we're going to do it. Today we are kickstarting a new open-style project aimed at supporting people across Canada who want to lead their own campaigns in their communities and beyond to stop the production and consumption of single-use, throwaway plastics. If you're as frustrated and concerned about plastic as we are, we need you to urge governments to hold the real culprits of this problem — the corporations that make and sell single-use plastic products — accountable and chart a new course towards a plastic-free, healthier future for our blue planet. We want to help build a global movement of people saying, "enough is enough!" to our throwaway culture and bring on the real solutions!



What is an open-style project? It's a project that was designed with input from our supporters and the wider public, and one that will be driven by Greenpeace supporters and change agents like you who are already keen to tackle this problem. **It's a project designed for Greenpeace to provide tools, tips and trainings for people interested in taking action in various ways but who may not be well-versed in campaign planning, tactics or communications.** It's a project aimed at building on the amazing work of organizations and individuals in the



#BreakFreeFromPlastic global movement, and across Canada. It's a project that seeks to help build a community of change agents who are connected, activated and empowered.

What tools is Greenpeace providing?

In Canada, and around the globe, we are excited to release an action how-to guide called *A Million Acts of Blue: A Toolkit for a Plastic-Free Future*. This toolkit is a comprehensive guide to creating change in your community with several kinds of actions you can take beyond reducing

your own plastic footprint. The actions are focused on stopping the problem at the source by pushing local businesses, restaurants, retailers and large corporations to reduce their reliance on single-use plastics, and by growing support for larger governmental action that holds plastic producers and polluters accountable for the mess they have created and that moves beyond our disposable-centric systems. The actions range from learning and sharing your passion for this issue to passing legislation in your city.

What's an Act of Blue? An Act of Blue is any action that helps to stop single-use plastic from being created in the first place. It's inspired by love for our amazing blue planet and the urgent need to protect our oceans, waterways, landscapes and communities. It aims to hold corporations accountable for the plastic pollution crisis they helped to create.

You can get your copy of the toolkit by pledging to support a plastic-free future at greenpeace.ca/plastics.

You might be thinking, well what about the usual Greenpeace style campaigns? Will you be calling out any plastic producers and polluters? The answer is, of course! Alongside our allies in the global #BreakfreeFromPlastic movement, we will continue to push for corporations to reduce and eventually phase out single-use plastic production like we did with our [#Choke campaign targeting Coca-Cola](#). We are taking action around the world to force companies to accept responsibility for their polluting products and to expose the companies that are most responsible for plastic pollution through activities like brand audits of trash collected during clean-ups. The toolkit offers guidance on how you can take these types of actions in your own community and also how you can directly support Greenpeace-led projects over the coming year.

So let's get to it. Here is a rundown of the 7 toolkit actions.

1. Learn, share, and join

The first step towards action is knowledge. Are you a member of a community group that is eager to learn more about how they can protect our oceans and communities? Maybe your child's teacher is looking for ways to teach kids about environmental protection? Our toolkit has powerpoints and tips for giving a presentation — you can even host a movie night!



2. Share your message through media

If you want to make a change in your community, start with local media! Local newspapers, blogs and magazines are great avenues for getting the word out. In the toolkit, we walk you through how to write a letter to the editor of your local newspaper and how to get it published.

3. Help create plastic-free supermarkets

Nowhere is the dominance of single-use plastics and wasteful packaging more obvious than [at local supermarkets](#). Make waves in your community by working to get local supermarkets to reduce their use of single-use plastics.

4. Get restaurants and cafes to ditch single-use plastics

Fed up with all the plastic straws and utensils at fast food places, restaurants, and cafes? Join the growing movement urging establishments to get rid of throwaway plastic products.

5. Lobby for a single-use plastic ban in your town or beyond

All over the world, towns, cities, and villages are standing up for a plastic-free future by implementing local bans and laws restricting the use of throwaway plastic. Be part of this movement by working with your neighbors to get your local government to do the same.

6. Organize a local cleanup and #BreakFreeFromPlastic brand audit

Everyone loves a litter cleanup event, so why not take it to the next level? Get your community together to clean up a local beach, park, riverbank, or other public space — **but don't stop there**. Go through the single-use plastics collected and identify which companies produced them. Let's [hold corporations responsible](#) for their plastic waste!



7. Start a plastic-free future community group!

You don't have to do it alone. We have a lot of work to do, and we'll get a lot further — and have more fun — together. Get some friends and neighbors together for a plastic-free future!

We've already reached a million people around the world who have called on big corporations to do their part to end single-use plastics. This year, we're aiming for another Million Acts of Blue.

Excited to get started? [Sign up now to get your toolkit and join the movement!](#)

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[Équiterre](#)

[May action of the month: tend your garden without pesticides](#)

The real spring with warm, sunny days is (hopefully!) on its way. That means it's time to plant your vegetable garden or give your balcony some TLC. But did you know—prepare for a shock—that most seeds in superstores are coated in pesticides?

Last winter, the media reported that [pesticides are being used inappropriately](#) and exposed conflicts of interest with industry. On top of that, seeds coated in bee-killing [neonicotinoid pesticides](#) have been proven to be ineffective and expendable by [hundreds of studies](#). So why buy them? Especially when there are healthy, more effective alternatives.

Rest assured, Équiterre is working with governments to reduce pesticide use. And today, we'd like to give you some pesticide-free gardening tips—for beginners and seasoned gardeners alike.

WHY BUY ORGANIC SEEDS?

Everything that grows starts with a seed—a never-ending little miracle. Certified organic seeds have plenty of advantages: they require a lot less watering, need fewer synthetic substances to grow and thrive with organic treatment.

According to [National Geographic](#), 93% of seed varieties in the U.S. have been lost in the last 80 years, mainly due to the agri-food industry—think Monsanto and other agrochemical giants. Miraculous, vital seeds have been preserved for thousands of years. Now, they're being lost forever—and fast. In 1903, there were 500 varieties of lettuce and by 1983, just 36.



PRACTICAL GUIDE TO GREEN GARDENING

A few years ago, we produced the downloadable [Guide pratique des trucs et conseils écolo en horticulture écologique](#) (French only). It tells you how to care for your lawn, and control insects and weeds without toxic substances or pesticides, and has everything you need to know about preparing the soil, natural and chemical fertilizers, top dressing, spiders, caterpillars, ants, slugs and aphids. It's well worth a read!

Did you know that from 2008 to 2014 the [Quebec Poison Control Centre](#) (CAPO) received over 12,542 calls relating to pesticide poisoning, half of which involved children?

BORROW A BOOK—OR SEEDS—FROM THE LIBRARY!

The hit documentary [Seeds: The Untold Story](#) provides a good overview of seed issues and seed preservation initiatives around the world. Closer to home, libraries have started lending seeds.

Seed libraries, often located in public libraries, allow you to share seeds by borrowing, planting and returning them. As well as encouraging local, organic farming, this initiative helps to preserve heirloom seeds, develop a bank of seeds suited to our climate and decrease dependency on the agri-food industry.

In Montreal, you can borrow seeds at the [grainothèque à la bibliothèque Ahuntsic](#), [Atwater Seed Library](#), [Eleanor London Côte Saint-Luc Public Library](#), [grainothèque Georges-Vanier](#), [grainothèque de Rosemont Petite-Patrie](#), [quartier Centre-Sud ou l'Arrondissement Ville-Marie](#) and [bibliothèque de Westmount](#).

Borrowing seeds from Westmount Public Library

- The Seed Lending Library is situated near the Main Circulation desk.
- You can take up to three seed packets per day.
- The seeds must be checked out on your library card at the Main Circulation Desk. At the end of the season, you are encouraged to return some of your newly cultivated seeds to the Seed Lending Library— creating a culture of sharing and sustainability.

For more information on borrowing from a seed library, listen to the report [“reportage de Radio-Canada « Emprunter des semences à la bibliothèque »](#) on Radio-Canada’s food show, *Bien dans son assiette*.

WHERE TO BUY ORGANIC SEEDS

[Jardins de l'Écoumène](#) in Lanaudière. Seeds are produced on site.

[Ferme coopérative Tourne-Sol](#) in Les Cèdres in Montérégie-Ouest. Seeds are produced at the farm.

[La société des plantes](#) in Kamouraska. Seeds are primarily produced at the farm.

Largest organic seed suppliers [Johnny's selected seeds](#) in the U.S.

[William Dam](#) in Ontario



Get to know your garden well—the kind of soil you have, the direction it faces and the prevailing wind—so you pick the right seeds. And opt for local varieties that are suited to the local environment and climate. They will have the best chance to thrive, being less vulnerable to disease.

NOT A GREEN THUMB? WE HAVE A SOLUTION! #PANIERSBIO

If you care about your health and our land but don't have a green thumb, you can buy local, organic fruits and vegetables. Better still, sign up for a basket every week or two from a friendly family farmer and eat seasonally. No need for a vegetable garden. Find a farmer and the nearest drop-off point at www.fermiersdefamille.com/en.

- Did you know you can sign up for a trial basket with most farms?
- See what it's like to pick up a basket by watching the [short video *Suivez-moi aller chercher mon panier bio!*](#) (in French)

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[Public transportation: our dreams are becoming a reality](#)

To all those who thought that environmentalists calling for structuring transportation networks in Quebec were big dreamers, recent news and developments show that it's important to dream big!

MAJOR TRANSPORTATION PROJECTS LAUNCHED IN QUEBEC CITIES



Here are the projects and recent announcements for sustainable development:

- A change of course in the **Quebec budget**: For the first time ever, 70% of new transportation investments will go to public transit and 30% to the road network.
 - The **Blue line metro extension** was officially announced this week. And this time, it's for real!
- A driverless car pilot project in Montreal
 - A structuring [transportation network in Quebec City](#)
 - The Rapibus extension and electric train **projects in Gatineau**
 - The **Réseau express métropolitain (REM)** in Montreal and associated public transit, which will make life easier for thousands of people. Read Équiterre's article [« The REM in 12 Questions and Answers »](#) (in French). Read the article [« REM Plus de mobilité dans le grand Montréal »](#) in La Presse (in French) by representatives of Téo Taxi, BIXI Montréal, Communauto, Téo Taxi and Netlift.

Transportation accounts for over 40% of Quebec's GHG emissions and is the industry responsible for the largest increase in emissions since 1990. So to see public transportation projects gathering momentum is a great cause for celebration!

ON COURSE FOR AN ELECTRIC FUTURE!

Following the adoption of the **Zero-Emission Vehicles (ZEV) Standard** in February, Équiterre will continue to ensure that Quebec establishes an ambitious sustainable mobility policy in the near future by serving on the advisory board established by the Government of Quebec for this purpose with other representatives from various backgrounds.

We will also continue to raise public awareness about transportation of the future through our [Electrifying Encounters](#) across Quebec and teach the next generation through the [My Charged-Up School](#) initiative.

Let's get onboard of tomorrow's transportation!

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[Environmental Health Perspectives](#)

[Identifying Vulnerable Periods of Neurotoxicity to Triclosan Exposure in Children](#)

Medina S. Jackson-Browne,¹ George D. Papandonatos,² Aimin Chen,³ Antonia M. Calafat,⁴ Kimberly Yolton,⁵ Bruce P. Lanphear,⁶ and Joseph M. Braun¹

¹Department of Epidemiology, Brown University, Providence, Rhode Island, USA, ²Department of Biostatistics, Brown University, Providence, Rhode Island, USA, ³Division of Epidemiology, Department of Environmental Health, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA, ⁴National Center for Environmental Health, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA, ⁵Department of Pediatrics, Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA, ⁶British Columbia Children's Hospital, Faculty of Health Sciences, Simon Fraser University, Vancouver, British Columbia, Canada.

Background: Exposure to triclosan, an endocrine disrupting chemical, may affect thyroid hormone homeostasis and adversely affect neurodevelopment.

Objective: Using a longitudinal pregnancy and birth cohort, we investigated associations between triclosan exposures during different time windows, and cognitive test scores at 8 y of age in 198 children from the HOME Study.

Methods: We quantified triclosan in urine samples from mother-child pairs up to nine times between the second trimester of gestation and 8 y of age. The Wechsler Intelligence Scale for Children-IV [i.e., Full-Scale Intelligence Quotient (IQ)] assessment was administered to HOME Study children at 8 y of age. We estimated covariate-adjusted triclosan-IQ associations at each visit. We also tested whether associations between triclosan concentrations and cognitive test scores varied among exposure at different time periods.

Results: Full-Scale IQ was not significantly associated with urinary triclosan concentrations during gestation or childhood but was significantly associated with a 10-fold increase in maternal urinary triclosan concentration at delivery [-4.5 points (95% CI: -7.0, -2.0)]. **Perceptual Reasoning Index (PRI)** scores were significantly decreased in association with urinary triclosan concentrations at delivery and at 2 y of age. Associations between repeated triclosan concentrations and cognitive test scores significantly varied among exposure at different time periods for Full-Scale IQ, PRI, Verbal Comprehension Index, and Working Memory (triclosan-visit interaction $p \leq 0.04$).

Conclusion: Urinary triclosan concentrations at delivery, but not during mid to late pregnancy and childhood, were associated with significantly lower children's cognitive test scores at 8 y of age in this cohort of U.S. children. <https://doi.org/10.1289/EHP2777>

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[Air Toxics in Relation to Autism Diagnosis, Phenotype, and Severity in a U.S. Family-Based Study](#)

Amy E. Kalkbrenner,¹ Gayle C. Windham,² Cheng Zheng,¹ Rob McConnell,³ Nora L. Lee,⁴ James J. Schauer,⁵ Brian Thayer,¹ Juhi Pandey,⁶ and Heather E. Volk⁷

¹Joseph J. Zilber School of Public Health, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, USA, ²Division of Environmental and Occupational Disease Control, California Department of Public Health, Richmond, California, USA, ³Department of Preventive Medicine, Keck School of Medicine, University of Southern California, Los Angeles, California, USA, ⁴Department of Epidemiology and Biostatistics, Drexel University Dornsife School of Public Health, Philadelphia, Pennsylvania, USA, ⁵Department of Civil and Environmental Engineering, University of Wisconsin-Madison, Madison, Wisconsin, USA, ⁶Center for Autism Research, Children's Hospital of Philadelphia and University of Pennsylvania, Philadelphia, Pennsylvania, USA, ⁷Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA.

Background: Previous studies have reported associations of perinatal exposure to air toxics, including some metals and volatile organic compounds, with autism spectrum disorder (ASD).

Objectives: Our goal was to further explore associations of perinatal air toxics with ASD and associated quantitative traits in high-risk multiplex families.

Methods: We included participants of a U.S. family-based study [the Autism Genetic Resource Exchange (AGRE)] who were born between 1994 and 2007 and had address information. We assessed associations between average annual concentrations at birth for each of 155 air toxics from the U.S. EPA emissions-based National-scale Air Toxics Assessment and *a*) ASD diagnosis (1,540 cases and 477 controls); *b*) a continuous measure of autism-related traits, the Social Responsiveness Scale (SRS, among 1,272 cases and controls); and *c*) a measure of autism severity, the Calibrated Severity Score (among 1,380 cases). In addition to the individual's air toxic level, mixed models (clustering on family) included the family mean air toxic level, birth year, and census covariates, with consideration of the false discovery rate.

Results: ASD diagnosis was positively associated with propionaldehyde, methyl *tert*-butyl ether (MTBE), bromoform, 1,4-dioxane, dibenzofurans, and glycol ethers and was inversely associated with 1,4-dichlorobenzene, 4,4'-methylene diphenyl diisocyanate (MDI), benzidine, and ethyl carbamate (urethane). These associations were robust to adjustment in two-pollutant models. Autism severity was associated positively with carbon disulfide and chlorobenzene, and negatively with 1,4-dichlorobenzene. There were no associations with the SRS.

Conclusions: Some air toxics were associated with ASD risk and severity, including some traffic-related air pollutants and newly-reported associations, but other previously reported associations with metals and volatile organic compounds were not reproducible. <https://doi.org/10.1289/EHP1867>

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[World Health Organization](#)

[Health must be the number one priority for urban planners](#)

Dr Maria Neira, WHO Director for the Department of Public Health, Environmental and Social Determinants of Health

Commentary 21 March 2018

Dr Maria Neira, WHO Director for the Department of Public Health, Environmental and Social Determinants of Health
Dr Maria Neira, WHO Director for the Department of Public Health, Environmental and Social Determinants of Health
WHO

Today, more than half of the world's population live in cities. By 2050, this proportion is expected to grow to two-thirds.

People live in cities to be close to employment and educational opportunities and services, and cities can be wonderful places for social interaction and access to cultural activities.

When cities are built using good planning principles, they can also be communities that foster health and well-being. Think of the cities or the neighborhoods that you have particularly enjoyed living in or visiting – and how such places looked, felt or even "smelt".

It is likely that these cities were full of people and life, with broad sidewalks and cycle lanes for easy, safe movement, an accessible public transport system and plenty of parks and green spaces, where people of all ages could exercise.

Unfortunately today, many rapidly growing cities are beset with heavy traffic, cramped slums and anonymous high-rise blocks that breed social alienation, noise and violence. All of these have a negative impact on our mental and physical health and well-being.

One of the best overall “indicators” of a healthy or unhealthy city is air quality. This is because air pollution levels are typically low in well-planned cities with good transport systems, walkable streets and ample green spaces to filter the air. And air pollution levels soar in urban settings that prioritize road transport over pedestrians and cyclists, and that allow uncontrolled sprawl in large, grey, unbroken blocs of asphalt and concrete.



More than 80% of all cities worldwide exceed the air quality limits set by the World Health Organization (WHO). And more than half of all cities that monitor air pollution report air quality levels 3.5 times or more than the WHO limits.

Air pollution is an insidious killer. Every year 3 million people die prematurely due to outdoor air pollution, which is heaviest in major cities of Asia, Africa and Latin America. Most of these deaths are due to heart attack, stroke, respiratory diseases and lung cancers – that are also among the world’s top disease killers today.

When tiny, invisible particles of pollution penetrate deep into people’s lungs and bloodstream, these toxic pollutants accumulate in the body and eventually lead to cardiovascular disease and cancer.

WHO estimates that air pollution causes about 1 in 3 deaths from stroke, chronic respiratory disease and lung cancer as well as 1 in 4 deaths from heart attack. Ground-level ozone, produced from the interaction of many different pollutants in sunlight, is also a cause of asthma and chronic respiratory illnesses.

Air pollution is one of the most critical health threats we are facing today. Health and wellbeing **MUST be the number one priority in urban planning.** If we don’t take action now, air pollution will choke our cities and make them even more deadly places to live.

Since most sources of outdoor air pollution are beyond the control of individuals, we must call on our city mayors and other local leaders to push for change and commit to tackling air pollution head on.

Local and national governments need to introduce policies and make investments that support cleaner transport, energy-efficient housing, power generation, industry and better municipal waste management.

But we can also lead change at community and individual level. This can include commitments to cycle or take public transport to work, when safe routes are available; to recycle waste or compost; or conserve water and energy at home and in the office. Strategies such as “pedibus” initiatives can encourage children to walk to school safely, and the creation of urban gardens can provide both healthy foods and venues for social interaction and physical activity.

Many of these measures to improve environmental health also help people to be more physically active and eat a healthier diet, so reducing obesity and diseases like diabetes and heart disease.

We know that when cities take action to reduce air pollution, they can achieve dramatic progress. Almost half of all cities monitoring air pollution in high-income countries reduced air pollution levels by 5% between 2008 and 2013.

But we must move faster and with more urgency, particularly in low- and middle-income countries where progress on air pollution has not been so encouraging and the air quality is getting worse.

We need to ensure that people know about the levels of air pollution in their city and that they understand its deadly impact on their health. This is the most effective way to trigger action.

WHO has joined forces with United Nations Environment and the Climate & Clean Air Coalition on the BreatheLife campaign to give citizens access to this information and to mobilize cities to work together to achieve safe air quality levels by 2030. Almost 40 cities, including London, Oslo, Santiago, Seoul, Singapore and San Antonio, have joined BreatheLife and we are continuously expanding this network.

In October this year, WHO is hosting the first global conference on air pollution and health in Geneva. We will bring together government ministers, city mayors, health professionals, academics, activists and researchers to share knowledge and mobilize action for cleaner air and better health globally.

We all need to work together to make our cities healthier – and happier – places to live.

Originally published by NewCities, an international nonprofit organization dedicated to making cities more inclusive, connected, healthy and vibrant.

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[International Journal of Environmental Research and Public Health](#)

[An Overview of Literature Topics Related to Current Concepts, Methods, Tools, and Applications for Cumulative Risk Assessment \(2007-2016\)](#)

[Mary A. Fox](#)¹, [L. Elizabeth Brewer](#)² and [Lawrence Martin](#)^{3,*}

¹ Department of Health Policy and Management, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD 21205, USA, ² Office of the Science Advisor, U.S. Environmental Protection Agency, Oak Ridge Institute for Science and Education (ORISE), Washington, DC 20004, USA,³ Office of the Science Advisor, U.S. Environmental Protection Agency, Washington, DC 20004, USA

Abstract: Cumulative risk assessments (CRAs) address combined risks from exposures to multiple chemical and nonchemical stressors and may focus on vulnerable communities or populations. Significant contributions have been made to the development of concepts, methods, and applications for CRA over the past decade. Work in both human health and ecological cumulative

risk has advanced in two different contexts. The first context is the effects of chemical mixtures that share common modes of action, or that cause common adverse outcomes. In this context two primary models are used for predicting mixture effects, dose addition or response addition. The second context is evaluating the combined effects of chemical and nonchemical (e.g., radiation, biological, nutritional, economic, psychological, habitat alteration, land-use change, global climate change, and natural disasters) stressors. CRA can be adapted to address risk in many contexts, and this adaptability is reflected in the range in disciplinary perspectives in the published literature. This article presents the results of a literature search and discusses a range of selected work with the intention to give a broad overview of relevant topics and provide a starting point for researchers interested in CRA applications. [View Full-Text.](#)

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Membership is open to non-governmental, research, and healthcare professionals, government policy-makers and individuals who are interested in the connections between human health and environmental exposures.

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CONTACT US:

Phone: (506)-455-8961 ext. 105

Email: cnhhe-rcshe@nb.lung.ca

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