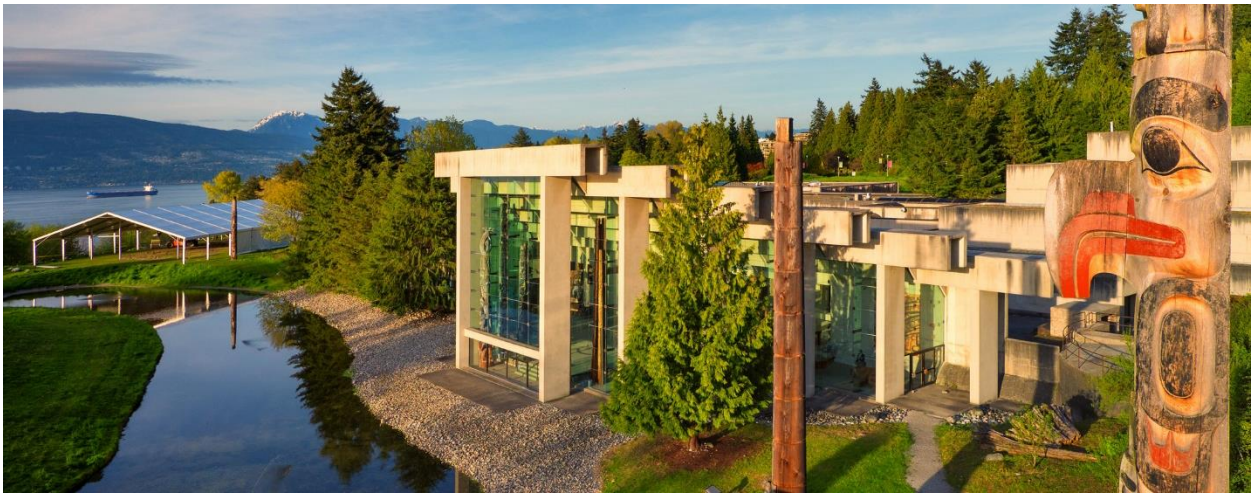
2019
EH Scan

National Collaborating Centre for Environmental Health
Centre de collaboration nationale en santé environnementale

ENVIRONMENTAL HEALTH RESEARCH SCAN

VOL 3 (5) MAY 2019



CONTENTS

Environmental Health (EH) Research Scan: Aims and Scope

NCCEH's EH Research Scan aims to expand awareness of topics in environmental health, in line with NCCEH's vision to be the indispensable online resource for environmental health practitioners and policy-makers across Canada. "*We focus on health risks associated with the physical environment and identify evidence-based interventions to mitigate those risks*." This review is not official or peer reviewed. It does not cover all research, news, and information, and NCCEH is not responsible for the accuracy of the content from media or databases. How to access the items? Click on the link related to each entry and it should take you to the item. Not all links are open access; some are abstract links where paid journal subscription is required.

National Collaborating Centre for Environmental Health
Centre de collaboration nationale en santé environnementale

EDITOR PICKS

Cyanobacteria - Tapping into the risks to drinking water [blog]

Juliette O'Keeffe (pictured on right), Knowledge Translation Scientist, NCCEH

"*What do dog deaths in Fredericton, a State of Emergency in Salem, Oregon, and vacuuming lakes in Florida all have in common? Read the article to find out more.*"

Maternal proximity to extremely low frequency electromagnetic fields and risk of birth defects.

Natalie Auger (pictured on right), with Tom Kosatsky and other co-authors

"We found no compelling evidence that residential proximity to extremely low frequency electromagnetic fields from electrical power grids increases the risk of birth defects. Women residing near electrical grids can be reassured that an effect on the risk of birth defects is unlikely."

Advancing Research for Public Health Emergency Preparedness in Canada

Public Health Ontario, April 2019

"…It is important for public health practitioners to define what it means to be prepared for diverse disaster and emergency risks, however, clarifying definitions and identifying metrics have been knowledge gaps in public health emergency preparedness (PHEP)."

Climate Atlas of Canada

Prairie Climate Centre

"The Climate Atlas of Canada is an interactive tool for citizens, researchers, businesses, and community and political leaders to learn about climate change in Canada. It combines climate science, mapping and storytelling to bring the global issue of climate change closer to home, and is designed to inspire local, regional, and national action and solutions."

Special Issue: Climate Change and Health

Health Promotion and Chronic Disease Prevention in Canada, Vol 39, No 4, April 2019

"…this Special Issue exemplifies the diversity of pathways through which climate change is currently impacting the health of Canadians, while underscoring both the grand health challenges and the grand health opportunities from a changing climate."

National Collaborating Centre for Environmental Health
Centre de collaboration nationale en santé environnementale

ENVIRONMENTAL HEALTH RESEARCH SCAN

SELECTED STAFF PUBLICATIONS (NCCEH or BCCDC)

1. Auger N, Arbour L, Luo W, Lee GE, Bilodeau-Bertrand M, Kosatsky T. **Maternal proximity to extremely low frequency electromagnetic fields and risk of birth defects**. Eur J Epidemiol. 2019. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30977029.
2. O'Keefe J. **Cyanobacteria - Tapping into the risks to drinking water [blog]**. Vancouver, BC: National Collaborating Center for Environmental Health; 2019 May 21. Available from: http://www.ncceh.ca/content/cyanobacteria-tapping-risks-drinking-water.
3. O'Keefe J. **Les cyanobactéries et la qualité de l'eau potable [blogue]**. Vancouver, BC: Centre de collaboration nationale en santé environnementale; 2019 mai 21. Available from: http://www.ccnse.ca/content/les-cyanobact%C3%A9ries-et-la-qualit%C3%A9-de-l%E2%80%99eau-potable.

NCCEH e-News (French and English)

1. Centre de collaboration nationale en santé environnementale. e-Nouvelles du CCNSE: Risques et vulnérabilités attribuables aux changements climatiques au Canada : nouvelles données probantes et ADAPTATIONSanté; Les changements climatiques sous les projecteurs : numéro spécial; Atlas climatique du Canada; plus... Vancouver, BC: CCNSE; 2019 mai. Available from: https://tinyurl.com/y3tq8lqo.
2. National Collaborating Center for Environmental Health. NCCEH eNews: Risks and vulnerabilities due to climate change in Canada: New evidence and HealthADAPT; Special Journal Issue on Climate Change; The Climate Atlas of Canada; more... . Vancouver, BC: NCCEH; 2019 05 May. Available from: https://tinyurl.com/yylg83rt.

INDIGENOUS ENVIRONMENTAL HEALTH

1. Asfaw HW, McGee T, Christianson AC. **The role of social support and place attachment during hazard evacuation: the case of Sandy Lake First Nation, Canada**. Environmental Hazards. 2019:1-21. Available from: https://doi.org/10.1080/17477891.2019.1608147.
2. Harper SL, Berrang-Ford L, Carcamo C, Cunsolo A, Edge VL, Ford JD, et al. **The Indigenous Climate–Food–Health Nexus**. People and Climate Change: Vulnerability, Adaptation, and Social Justice. 2019:184. Available from: https://www.oxfordscholarship.com/view/10.1093/oso/9780190886455.001.0001/oso-9780190886455-chapter-10.
3. Caron-Beaudoin É, Ayotte P, Laouan Sidi EA, Gros-Louis McHugh N, Lemire M. **Exposure to perfluoroalkyl substances (PFAS) and associations with thyroid parameters in First Nation children and youth from Quebec.** Environ Int. 2019;128:13-23. Available from: http://www.sciencedirect.com/science/article/pii/S0160412018330368.

4. Karunanayake CP, Amin K, Abonyi S, Dosman JA, Pahwa P. **Prevalence and determinants of asthma among aboriginal adolescents in Canada**. J Asthma. 2019:1-7. Available from: https://doi.org/10.1080/02770903.2018.1541354.
5. Punam P, Khalid A, Chandima K, Sylvia A, James D. **Prevalence and Associated Risk Factors of Chronic Bronchitis among Aboriginal Children and Adolescents in Canada - Results from 2012 Aboriginal Peoples Survey**. International Journal of Respiratory and Pulmonary Medicine. 2019;6(1).
6. Ray L, Burnett K, Cameron A, Joseph S, LeBlanc J, Parker B, et al. **Examining Indigenous food sovereignty as a conceptual framework for health in two urban communities in Northern Ontario, Canada**. Global Health Promotion. 2019;26(3_suppl):54-63. Available from: https://journals.sagepub.com/doi/abs/10.1177/1757975919831639.

AGRICULTURAL OPERATIONS

1. Audate PP, Fernandez MA, Cloutier G, Lebel A. **Impacts of Urban Agriculture on the Determinants of Health: Scoping Review Protocol**. JMIR research protocols. 2018;7(3):e89-e. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29588270
2. Siegner A, Sowerwine J, Acey C. Does Urban Agriculture Improve Food Security? Examining the Nexus of Food Access and Distribution of Urban Produced Foods in the United States: A Systematic Review. Sustainability. 2018;10(9):2988. Available from: https://www.mdpi.com/2071-1050/10/9/2988.

BIOLOGICAL AGENTS

1. HealthLink BC. **Indoor Air Quality: Mould and Other Biological Contaminants**. Victoria, BC: Government of British Columbia and the BC Centre for Disease Control; 2018 Jun. Available from: https://www.healthlinkbc.ca/sites/hlbcprox-prod.health.gov.bc.ca/files/documents/healthfiles/hfile65b.pdf.

BUILT ENVIRONMENT

1. 8 80 Cities. **About us. We believe whether you're 8 or 80 years old, cities should work for everyone**. Toronto, ON: 8 80 Cities; Available from: https://www.880cities.org/about-8-80-cities/.
2. Buttazzoni AN. **Active and safe routes to school**. London, ON: University of Western Ontario; 2018. Available from: https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=7672&context=etd.
3. Dinu M, Pagliai G, Macchi C, Sofi F. **Active Commuting and Multiple Health Outcomes: A Systematic Review and Meta-Analysis**. Sports Med. 2019;49(3):437-52. Available from: https://link.springer.com/article/10.1007/s40279-018-1023-0.
4. Farkas B, Wagner DJ, Nettel-Aguirre A, Friedenreich C, McCormack GR. **Evidence synthesis - A systematized literature review on the associations between neighbourhood built characteristics and walking among Canadian adults**. Health promotion and chronic disease prevention in Canada : research, policy and practice. 2019;39(1):1-14. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30652838
5. Gilliland J, Tobin D, Clark AF, Barszczuk A. **Children and nature - a systematic review**. Toronto, ON: Lawson Foundation, Human Environments Analysis Laboratory (HEAL); 2018. Available from: https://lawson.ca/wp-content/uploads/2018/04/YE_Systematic_Review_HEAL.pdf.
6. Gouldson A, Sudmant A, Khreis H, Papargyropoulou E. **The Economic and Social Benefits of Low-Carbon Cities: A Systematic Review of the Evidence**. Leeds, UK: New Climate Economy; 2019.

Available from: https://newclimateeconomy.report/workingpapers/workingpaper/the-economic-and-social-benefits-of-low-carbon-cities-a-systematic-review-of-the-evidence/.

7. Hajek A, König H-H. **Self-Rated Health and Social Exclusion: Does Gardening Moderate This Relation? Evidence from the German Ageing Survey**. Int J Environ Res Public Health. 2019;16(10):1834. Available from: http://www.mdpi.com/1660-4601/16/10/1834.
8. Hoisington AJ, Stearns-Yoder KA, Schuldt SJ, Beemer CJ, Maestre JP, Kinney KA, et al. **Ten questions concerning the built environment and mental health**. Build Environ. 2019;155:58-69. Available from: http://www.sciencedirect.com/science/article/pii/S0360132319301982.
9. Hystad P, Payette Y, Noisel N, Boileau C. **Green space associations with mental health and cognitive function: Results from the Quebec CARTaGENE cohort**. Environmental Epidemiology. 2019;3(1):e040. Available from: https://journals.lww.com/environepidem/Fulltext/2019/02000/Green_space_associations_with_mental_health_and.6.aspx.
10. Mizen A, Song J, Fry R, Akbari A, Berridge D, Parker SC, et al. **Longitudinal access and exposure to green-blue spaces and individual-level mental health and well-being: protocol for a longitudinal, population-wide record-linked natural experiment.** BMJ Open. 2019;9(4):e027289. Available from: https://bmjopen.bmj.com/content/bmjopen/9/4/e027289.full.pdf.
11. Payne SR, Bruce N. **Exploring the Relationship between Urban Quiet Areas and Perceived Restorative Benefits**. Int J Environ Res Public Health. 2019;16(9):1611. Available from: http://www.mdpi.com/1660-4601/16/9/1611.
12. Preuß M, Nieuwenhuijsen M, Marquez S, Cirach M, Dadvand P, Triguero-Mas M, et al. **Low Childhood Nature Exposure is Associated with Worse Mental Health in Adulthood**. Int J Environ Res Public Health. 2019;16(10):1809. Available from: http://www.mdpi.com/1660-4601/16/10/1809.
13. Pun VC, Manjourides J, Suh HH. **Association of neighborhood greenness with self-perceived stress, depression and anxiety symptoms in older U.S adults**. Environ Health. 2018;17(1):39. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29661194.

CHEMICAL AGENTS – METALS, GENERAL

General

1. Bilal M, Iqbal HMN. **An insight into toxicity and human-health-related adverse consequences of cosmeceuticals — A review**. Sci Total Environ. 2019;670:555-68. Available from: https://www.sciencedirect.com/science/article/pii/S0048969719312525.
2. Caron-Beaudoin É, Ayotte P, Laouan Sidi EA, Gros-Louis McHugh N, Lemire M. **Exposure to perfluoroalkyl substances (PFAS) and associations with thyroid parameters in First Nation children and youth from Quebec.** Environ Int. 2019;128:13-23. Available from: http://www.sciencedirect.com/science/article/pii/S0160412018330368.
3. Dummer TJD. **The challenges to public health of arsenic in well water**. BC Toxicology News Monthly Bulletin. 2019;2(4). Available from: http://blogs.ubc.ca/bctox2015/files/2019/05/1.-Arsenic_in_well_water_Dummer_BCTOX-24-433-434.pdf.
4. Jackson-Browne MS, Papandonatos GD, Chen A, Yolton K, Lanphear BP, Braun JM. **Early-life triclosan exposure and parent-reported behavior problems in 8-year-old children**. Environ Int. 2019. Available from: http://www.sciencedirect.com/science/article/pii/S0160412018316921.

5. Juric A, Singh K, Hu XF, Chan HM. **Exposure to triclosan among the Canadian population: Results of the Canadian Health Measures Survey (2009–2013)**. Environ Int. 2019;123:29-38. Available from: http://www.sciencedirect.com/science/article/pii/S0160412018317781.
6. Pelch KE, Bolden AL, Kwiatkowski CF. **Environmental Chemicals and Autism: A Scoping Review of the Human and Animal Research**. Environ Health Perspect. 2019;127(4):046001. Available from: https://doi.org/10.1289/EHP4386.

CHEMICAL AGENTS - PESTICIDES

1. Montiel-Leon JM, Munoz G, Vo Duy S, Do DT, Vaudreuil MA, Goeury K, et al. **Widespread occurrence and spatial distribution of glyphosate, atrazine, and neonicotinoids pesticides in the St. Lawrence and tributary rivers**. Environ Pollut. 2019;250:29-39. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30981933.
2. Seltenrich N. **Into the Weeds: Regulating Pesticides in Cannabis**. Environ Health Perspect.127(4):042001. Available from: https://doi.org/10.1289/EHP5265.

CHEMICAL AGENTS – SHALE GAS

CHILDREN'S ENVIRONMENTAL HEALTH

1. Alderton A, Villanueva K, O'Connor M, Boulangé C, Badland H. **Reducing Inequities in Early Childhood Mental Health: How Might the Neighborhood Built Environment Help Close the Gap? A Systematic Search and Critical Review**. Int J Environ Res Public Health. 2019;16(9):1516. Available from: http://www.mdpi.com/1660-4601/16/9/1516.
2. Delmas MA, Kohli A. **Can Apps Make Air Pollution Visible? User Engagement with Air Quality Information**. User Engagement with Air Quality Information (March 15, 2019). 2019.
3. Lee M, Kim S, Ha M. **Community greenness and neurobehavioral health in children and adolescents**. Sci Total Environ. 2019;672:381-8. Available from: http://www.sciencedirect.com/science/article/pii/S004896971931469X.
4. Preuß M, Nieuwenhuijsen M, Marquez S, Cirach M, Dadvand P, Triguero-Mas M, et al. **Low Childhood Nature Exposure is Associated with Worse Mental Health in Adulthood**. Int J Environ Res Public Health. 2019;16(10):1809. Available from: http://www.mdpi.com/1660-4601/16/10/1809.
5. Rothman L, Macarthur C, Wilton A, Howard AW, Macpherson AK. Recent trends in child and youth emergency department visits because of pedestrian motor vehicle collisions by socioeconomic status in Ontario, Canada. Inj Prev. 2019. Available from: https://injuryprevention.bmj.com/content/injuryprev/early/2019/04/11/injuryprev-2018-043090.full.pdf.
6. Social exposome cluster. **Extrinsic factors that affect child health and development**. Vancouver, BC: University of British Columbia; 2019; Available from: https://socialexposome.ubc.ca/projects/extrinsic-factors-affect-child-health-and-development.
7. Social exposome cluster. **Policies and interventions**. Vancouver, BC: University of British Columbia; 2019; Available from: https://socialexposome.ubc.ca/projects/policies-and-interventions.
8. Wine O, Buka I, Day A, Terris S, Clarkes M-A, Brennan L, et al. **Building a children's health and environment research agenda in Alberta, Canada: A multi-stakeholder engagement process**. Gateways: International Journal of Community Research and Engagement. 2019;12(1).

CLIMATE CHANGE

1. Benmarhnia T, Zhao X, Wang J, Macdonald M, Chen H. **Evaluating the potential public health impacts of the Toronto cold weather program**. Environ Int. 2019;127:381-6. Available from: https://www.sciencedirect.com/science/article/pii/S0160412018327156.
2. Chang H-P, Ma C-C, Chen H-S. **Climate Change and Consumer's Attitude toward Insect Food**. Int J Environ Res Public Health. 2019;16(9):1606. Available from: http://www.mdpi.com/1660-4601/16/9/1606.
3. Cunsolo A, Harper SL. Editorial - Climate change and health: a grand challenge and grand opportunity for public health in Canada. Health Promot Chronic Dis Prev Can. 2019;39(4):119-21.
4. Cunsolo A, Harper SL. **Special Issue: Climate Change and Health**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-39-no-4-2019.html.
5. Cunsolo A, Harper SL. **Editorial – Climate change and health: a grand challenge and grand opportunity for public health in Canada**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-39-no-4-2019/climate-change-health-challenge-opportunity-public-health-canada.html.
6. Demers I, Gosselin P. **At-a-glance – Pollens, climate and allergies: Quebec initiatives**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-39-no-4-2019/pollens-climate-allergies-quebec-initiatives.html.
7. Hayes K, Berry P, Ebi KL. **Factors Influencing the Mental Health Consequences of Climate Change in Canada**. Int J Environ Res Public Health. 2019;16(9):1583. Available from: http://www.mdpi.com/1660-4601/16/9/1583.
8. Howard C, Huston P. **The health effects of climate change: Know the risks and become part of the solutions**. Can Commun Dis Rep. 2019;45(5). Available from: https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2019-45/issue-5-may-2-2019/article-1-health-solution-climate-change-risks-solutions.html.
9. Keskitalo ECH, editor. **Research Handbook on Climate Change Adaptation Policy**. Northampton, MA: Edward Elgar Publishing; 2019. Available from: https://www.e-elgar.com/shop/research-handbook-on-climate-change-adaptation-policy.
10. Kingsley M. **Commentary - Climate change, health and green space co-benefits**. Health Promot Chronic Dis Prev Can. 2019;39(4):131-5. Available from: https://www.ncbi.nlm.nih.gov/pubmed/31021064.
11. Kipp A, Cunsolo A, Gillis D, Sawatzky A, Harper SL. The need for community-led, integrated and innovative monitoring programmes when responding to the health impacts of climate change. Int J Circumpolar Health. 2019;78(2):1517581. Available from: https://doi.org/10.1080/22423982.2018.1517581.
12. Kipp A, Cunsolo A, Vodden K, King N, Manners S, Harper SL. **Climate change impacts on health and wellbeing in rural and remote regions across Canada: a synthesis of the literature**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-

practice/vol-39-no-4-2019/climate-change-impacts-health-wellbeing-rural-remote-regions-across-canada-synthesis.html.

13. Lee S. **The Health Consequences of Climate Change**. Chicago Policy Review. 2019. Available from: https://search.proquest.com/openview/2c5d942e6f8b55632f06714d99d41189/1?pq-origsite=gscholar&cbl=1576347.
14. Malena-Chan R. **Original qualitative research – A narrative model for exploring climate change engagement among young community leaders**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-39-no-4-2019/narrative-model-exploring-climate-change-engagement-young-community-leaders.html.
15. Malena-Chan R. **Commentary – The Climate Change and Health Adaptation Program: Indigenous climate leaders' championing adaptation efforts**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-39-no-4-2019/climate-change-health-adaptation-program-indigenous-climate-leaders-championing-adaptation-efforts.html.
16. Mi Z, Guan D, Liu Z, Liu J, Viguié V, Fromer N, et al. **Cities: The core of climate change mitigation**. Journal of Cleaner Production. 2019;207:582-9. Available from: http://www.sciencedirect.com/science/article/pii/S0959652618330488.
17. Prairie Climate Centre. **Climate Atlas of Canada**. Winnipeg, MB: University of Winnipeg, Prairie Climate Centre; 2019; Available from: https://climateatlas.ca/.
18. Rahman M, Wellstead A, Howlett M, editors. **14. From Adaptive Capacity to Policy Capacity Adaptation Assessments: Insights from the Policy Sciences**. Northampton, MA: Edward Elgar Publishing; 2019. Available from: https://www.e-elgar.com/shop/research-handbook-on-climate-change-adaptation-policy.
19. Richards G, Frehs J, Myers E, Van Bibber M. **Commentary – The Climate Change and Health Adaptation Program: Indigenous climate leaders' championing adaptation efforts**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-39-no-4-2019/climate-change-health-adaptation-program-indigenous-climate-leaders-championing-adaptation-efforts.html.
20. Tong S, Ebi K. **Preventing and mitigating health risks of climate change**. Environ Res. 2019;174:9-13. Available from: http://www.sciencedirect.com/science/article/pii/S001393511930221X.
21. Wiley E. **The unseen impacts of climate change on mental health**. BC Medical Journal. 2019;61(4). Available from: https://www.bcmj.org/cohp/unseen-impacts-climate-change-mental-health.

COMMUNICABLE AND INFECTIOUS DISEASES

1. Ogden NH, Wilson JRU, Richardson DM, Hui C, Davies Sarah J, Kumschick S, et al. **Emerging infectious diseases and biological invasions: a call for a One Health collaboration in science and management**. Royal Society Open Science. 2019;6(3):181577. Available from: https://doi.org/10.1098/rsos.181577.

DRINKING WATER

1. O'Keefe J. **Cyanobacteria - Tapping into the risks to drinking water [blog]**. Vancouver, BC: National Collaborating Center for Environmental Health; 2019 May 21. Available from: http://www.ncceh.ca/content/cyanobacteria-tapping-risks-drinking-water.

2. Public Health Ontario. **The Effect of Flooding on Private Drinking Water Systems**. Toronto, ON: PHO; 2019 May. Available from: https://www.publichealthontario.ca/en/about/blog/2018/flooding-private-drinking-water.
3. Sanganyado E, Gwenzi W. **Antibiotic resistance in drinking water systems: Occurrence, removal, and human health risks**. Sci Total Environ. 2019;669:785-97. Available from: https://www.sciencedirect.com/science/article/pii/S0048969719311441.
4. U.S. Environmental Protection Agency. **Draft Interim Recommendations for Addressing Groundwater Contaminated with PFOA and PFOS**. Washington, DC: US EPA; 2019 Apr. Available from: https://www.epa.gov/pfas/draft-interim-recommendations-addressing-groundwater-contaminated-pfoa-and-pfos.

EMERGENCY PREPAREDNESS

1. Asfaw HW, McGee T, Christianson AC. **The role of social support and place attachment during hazard evacuation: the case of Sandy Lake First Nation, Canada**. Environmental Hazards. 2019:1-21. Available from: https://doi.org/10.1080/17477891.2019.1608147.
2. Belleville G, Ouellet M-C, Morin CM. Post-Traumatic Stress among Evacuees from the 2016 Fort McMurray Wildfires: Exploration of Psychological and Sleep Symptoms Three Months after the Evacuation. Int J Environ Res Public Health. 2019;16(9):1604. Available from: http://www.mdpi.com/1660-4601/16/9/1604.
3. Caturay A, O'Sullivan T, Gibson J, Thompson A, Khan Y. **Exploring the Ethical Dimensions of All-Hazards Public Health Emergency Preparedness in Canada**. Prehospital Disaster Med. 2019;34(s1):s20-s. Available from: https://www.cambridge.org/core/article/exploring-the-ethical-dimensions-of-allhazards-public-health-emergency-preparedness-in-canada/0BC6973BED00CE5BBF60017E2438F00F.
4. Daniels L. **Wildfires: Causes, Consequences and Coexistence (in Victoria)**. UBC Blue and Gold Podcast. Vancouver, BC: University of British Columbia; 2019.
5. Maltais D, Tremblay A-J, Labra O, Fortin G, Généreux M, Roy M, et al. **Seniors Who Experienced the Lac-Mégantic Train Derailment Tragedy: What Are the Consequences on Physical and Mental Health?** Gerontology and Geriatric Medicine. 2019;5:2333721419846191. Available from: https://journals.sagepub.com/doi/abs/10.1177/2333721419846191.
6. Mamuji AA, Rozdilsky JL. **Canada's 2016 Fort McMurray wildfire evacuation: experiences of the Muslim community**. International Journal of Emergency Management. 2019;15(2):125-46. Available from: https://www.inderscienceonline.com/doi/abs/10.1504/IJEM.2019.099374.
7. Public Health Ontario. **Advancing Research for Public Health Emergency Preparedness in Canada**. Toronto, ON: PHO; 2019 May. Available from: https://www.publichealthontario.ca/en/about/blog/2019/emergency-preparedness-week-2019.
8. Westcott R, Ronan K, Bambrick H, Taylor M. **Public health and natural hazards: new policies and preparedness initiatives developed from an Australian bushfire case study**. Aust N Z J Public Health.0(0). Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/1753-6405.12897.

ENVIRONMENTAL HEALTH SURVEILLANCE

1. Vincze S, Al Dahouk S, Dieckmann R. **Microbiological Safety of Non-Food Products: What Can We Learn from the RAPEX Database?** Int J Environ Res Public Health. 2019;16(9):1599. Available from: http://www.mdpi.com/1660-4601/16/9/1599.

ENVIRONMENTAL PLANNING

1. Flowers EP, Timperio A, Hesketh KD, Veitch J. **Examining the Features of Parks That Children Visit During Three Stages of Childhood**. Int J Environ Res Public Health. 2019;16(9):1658. Available from: http://www.mdpi.com/1660-4601/16/9/1658.
2. Gregg K, Hess P. **Complete streets at the municipal level: A review of American municipal Complete Street Policy**. Int J Sust Transport. 2019;13(6):407-18. Available from: https://www.tandfonline.com/doi/full/10.1080/15568318.2018.1476995.
3. Markovich J, D'Angelo MS, Dinh T. **Community Wellbeing: A Framework for the Design Professions**. Toronto, ON: Conference Board of Canada; 2018 Jul. Available from: https://www.conferenceboard.ca/temp/e0c7316f-cafa-4c6a-958e-e880f9c3e443/9787_CommunityWellbeing-RPT.pdf.

FOOD

Safety

1. European Commission Group of Chief Scientific Advisors. **Environmental and health risks of microplastic pollution**. Luxembourg: European Commission; 2019. Available from: https://ec.europa.eu/info/sites/info/files/research_and_innovation/groups/sam/ec_rtd_sam-mnp-opinion_042019.pdf.
2. Gasperi J, Wright SL, Dris R, Collard F, Mandin C, Guerrouache M, et al. **Microplastics in air: Are we breathing it in?** Current Opinion in Environmental Science & Health. 2018;1:1-5. Available from: http://www.sciencedirect.com/science/article/pii/S2468584417300119.
3. Hughes DF, Green ML, Warner JK, Davidson PC. There's a frog in my salad! A review of online media coverage for wild vertebrates found in prepackaged produce in the United States. Sci Total Environ. 2019;675:1-12. Available from: https://www.sciencedirect.com/science/article/pii/S004896971931246X.
4. Koelmans AA, Nor NHM, Hermsen E, Kooi M, Mintenig SM, De France J. **Microplastics in freshwaters and drinking water: Critical review and assessment of data quality**. Water research. 2019. Available from: https://www.sciencedirect.com/science/article/pii/S0043135419301794.
5. Science Advice for Policy by European Academies. **A scientific perspective on microplastics in nature and society**. Berlin , Germany: SAPEA; 2019 Apr. Available from: https://www.sapea.info/topics/microplastics/.
6. Wiggers D, Asbridge M, Baskerville NB, Reid JL, Hammond D. **Exposure to Caffeinated Energy Drink Marketing and Educational Messages among Youth and Young Adults in Canada**. Int J Environ Res Public Health. 2019;16(4):642. Available from: http://www.mdpi.com/1660-4601/16/4/642.

Security

1. Ford JD, Clark D, Naylor A. **Food insecurity in Nunavut: Are we going from bad to worse?** Can Med Assoc J. 2019;191(20):E550-E1. Available from: http://www.cmaj.ca/content/cmaj/191/20/E550.full.pdf.
2. Pollard CM, Booth S. **Food Insecurity and Hunger in Rich Countries—It Is Time for Action against Inequality**. Int J Environ Res Public Health. 2019;16(10):1804. Available from: http://www.mdpi.com/1660-4601/16/10/1804.

3. Tarasuk V, Fafard St-Germain A-A, Loopstra R. **The Relationship Between Food Banks and Food Insecurity: Insights from Canada**. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations. 2019. Available from: https://doi.org/10.1007/s11266-019-00092-w.
4. Tarasuk V, Fafard St-Germain A-A, Mitchell A. **Geographic and socio-demographic predictors of household food insecurity in Canada, 2011–12**. BMC Public Health. 2019;19(1):12. Available from: https://doi.org/10.1186/s12889-018-6344-2.
5. Tarasuk V, Li N, Dachner N, Mitchell A. **Household Food Insecurity in Ontario during a Period of Poverty Reduction, 2005–2014**. Can Public Pol. 2019;45(1):93-104. Available from: https://www.utpjournals.press/doi/abs/10.3138/cpp.2018-054.

GENERAL

1. Carpenter CS, Warman C. **What do bicycle helmet laws do? Evidence from Canada**. Econ Inq. 2019;57(2):832-54. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/ecin.12739.
2. Konkel L. **What three generations of California families can tell us about the links between our health and our environment**. Ensia; 2019. Available from: https://ensia.com/features/links-between-health-environment-long-term-cohort-studies/.
3. Masood S, Kothari A, Regan S. **The use of research in public health policy: a systematic review**. Evidence & Policy: A Journal of Research, Debate and Practice. 2019. Available from: https://www.ingentaconnect.com/content/tpp/ep/pre-prints/content-ppevidpol1700011r2.
4. Morgan RL, Beverly B, Ghersi D, Schünemann HJ, Rooney AA, Whaley P, et al. **GRADE guidelines for environmental and occupational health: A new series of articles in Environment International**. Environ Int. 2019;128:11-2. Available from: http://www.sciencedirect.com/science/article/pii/S0160412019311456.
5. Morgan RL, Whaley P, Thayer KA, Schünemann HJ. Identifying the PECO: A framework for formulating good questions to explore the association of environmental and other exposures with health outcomes. Environ Int. 2018;121:1027-31. Available from: http://www.sciencedirect.com/science/article/pii/S0160412018302046.
6. Poirier AE, Ruan Y, Volesky KD, King WD, O'Sullivan DE, Gogna P, et al. **The current and future burden of cancer attributable to modifiable risk factors in Canada: Summary of results**. Prev Med. 2019;122:140-7. Available from: http://www.sciencedirect.com/science/article/pii/S0091743519301318.

HEALTH EQUITY

1. Pollock N, Cunsolo A. **Collaborative approaches to wellness and health equity in the Circumpolar North: Introduction to the Special Issue**. Int J Circumpolar Health. 2019;78(2):1608084. Available from: https://doi.org/10.1080/22423982.2019.1608084.
2. Thomson K, Hillier-Brown F, Todd A, McNamara C, Huijts T, Bambra C. **The effects of public health policies on health inequalities in high-income countries: an umbrella review**. BMC Public Health. 2018;18(1):869-. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30005611 https://www.ncbi.nlm.nih.gov/pmc/PMC6044092/.

3. Wittmer J, Parizeau K. **Informal Recyclers' Health Inequities in Vancouver, BC**. NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy. 2018;28(2):321-43. Available from: https://journals.sagepub.com/doi/abs/10.1177/1048291118777845.

HEALTH IMPACT ASSESSMENT

1. Buse C, Cornisk K, Parkes M, Harder H, Fumerton R, Rasali D, et al. **Towards more robust and locally meaningful indicators for monitoring health and the social determinants of health related to resource extraction and development across Northern BC**. Prince George, BC: Northern Health. Report prepared for Northern Health. Prince George, BC: University of Northern British Columbia; 2018. Available from: https://www.northernhealth.ca/sites/northern_health/files/services/office-health-resource-development/documents/nh-unbc-indicators-report.pdf.
2. Pew Expert Panel. **Do Health Impact Assessments Promote Healthier Decision-Making? Findings from a national study of the perspectives of HIA stakeholders**. Washington, DC: Pew Charitable Trusts; 2019 Feb. Available from: https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/02/do-health-impact-assessments-promote-healthier-decision-making.
3. Takaro T. **Major Human Health Impacts of the Increase in Tanker Traffic Due to the Trans Mountain Pipeline Expansion**. Burnaby, BC: Simon Fraser University; 2018 Dec. Available from: https://apps.neb-one.gc.ca/REGDOCS/File/Download/3718220.

INDOOR AIR

1. Maynard RL. **Health effects of indoor air pollution**. In: R M Harrison REH, editor. Indoor air Pollution. Cambridge, UK: Royal Society of Chemistry; 2019. Available from: https://pubs.rsc.org/en/content/chapter/bk9781788015141-00196/978-1-78801-514-1.

NUISANCE CONTROL

1. Najean P, Bydder C. **First Canadian odour conference, calgary - odour nuisance, assessment, measurement and control**. Air Quality Clim Change. 2019;53(1). Available from: https://search.informit.com.au/documentSummary;dn=352727850734312;res=IELENG.

OUTDOOR AIR

1. Filippini T, Hatch Elizabeth E, Rothman Kenneth J, Heck Julia E, Park Andrew S, Crippa A, et al. **Association between Outdoor Air Pollution and Childhood Leukemia: A Systematic Review and Dose–Response Meta-Analysis**. Environ Health Perspect. 2019;127(4):046002. Available from: https://doi.org/10.1289/EHP4381.
2. Gardiner B. **Choked: Life and breath in the age of air pollution**. Chicago, IL: University of Chicago Press; 2019. Available from: https://www.press.uchicago.edu/ucp/books/book/chicago/C/bo27863392.html.
3. Lewis J. **Exposures in the City: Looking for Socioeconomic Patterns for the Urban Exposome**. Environ Health Perspect. 2019;127(4):044003. Available from: https://doi.org/10.1289/EHP4807.
4. Mehiriz K, Gosselin P. Evaluation of the Impacts of a Phone Warning and Advising System for Individuals Vulnerable to Smog. Evidence from a Randomized Controlled Trial Study in Canada. Int J Environ Res Public Health. 2019;16(10):1817. Available from: http://www.mdpi.com/1660-4601/16/10/1817.

5. Morawska L. **A report from the first WHO global conference on air pollution and health**. Air Quality Clim Change. 2019;53(1). Available from: https://search.informit.com.au/documentSummary;dn=352783749648087;res=IELENG;type=pdf.
6. Nieuwenhuijsen Mark J, Agier L, Basagaña X, Urquiza J, Tamayo-Uria I, Giorgis-Allemand L, et al. **Influence of the Urban Exposome on Birth Weight**. Environ Health Perspect.127(4):047007. Available from: https://doi.org/10.1289/EHP3971.
7. Schraufnagel DE, Balmes JR, Cowl CT, De Matteis S, Jung S-H, Mortimer K, et al. Air Pollution and Noncommunicable Diseases: A Review by the Forum of International Respiratory Societies' Environmental Committee, Part 1: The Damaging Effects of Air Pollution. Chest. 2019;155(2):409-16. Available from: https://doi.org/10.1016/j.chest.2018.10.042.

PERSONAL SERVICE ESTABLISHMENTS

1. Lamplugh A, Harries M, Xiang F, Trinh J, Hecobian A, Montoya LD. **Occupational exposure to volatile organic compounds and health risks in Colorado nail salons**. Environ Pollut. 2019;249:518-26. Available from: http://www.sciencedirect.com/science/article/pii/S0269749118346487.

PEST CONTROL

PHYSICAL AGENTS

RADIATION

1. Jassim MA, Isaifan R. **A Review on the Sources and Impacts of Radon Indoor Air Pollution**. Journal of Environmental and Toxicological Studies. 2018;2(1). Available from: https://sciforschenonline.org/journals/environmental-toxicological-studies/JETS-2-112.php.
2. Sienkiewicz Z, van Rongen E. Can Low-Level Exposure to Radiofrequency Fields Effect Cognitive Behaviour in Laboratory Animals? A Systematic Review of the Literature Related to Spatial Learning and Place Memory. Int J Environ Res Public Health. 2019;16(9):1607. Available from: http://www.mdpi.com/1660-4601/16/9/1607.

RECREATIONAL AND SURFACE WATER

RISK ASSESSMENT, COMMUNICATION

1. Jha A, Lin L, Short SM, Argentini G, Gamhewage G, Savoia E**. Integrating emergency risk communication (ERC) into the public health system response: Systematic review of literature to aid formulation of the 2017 WHO Guideline for ERC policy and practice**. PLoS ONE. 2018;13(10):e0205555. Available from: https://doi.org/10.1371/journal.pone.0205555.
2. MacIntyre E, Khanna S, Darychuk A, Copes R, Schwartz B. **Evaluating risk communication during extreme weather and climate change: a scoping review**. Health Promot Chronic Dis Prev Can. 2019;39(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-39-no-4-2019/evaluating-risk-communication-during-extreme-weather-climate-change-scoping-review.html.

SENIORS' ENVIRONMENTAL HEALTH

1. Jeffery B, Muhajarine N, Johnson S, McIntosh T, Hamilton C, Novik N. **An Overview of Healthy Aging Strategies in Rural and Urban Canada**. Saskatoon, SK: Saskatchewan Population Health and Evaluation Research Unit, University of Regina and University of Saskatchewan; 2018 Jun. Available from: http://www.spheru.ca/publications/files/Healthy%20Aging%20Enviro%20Scan%20Report%20June%202018%20FINAL%2026-Sep-2018.pdf.

TOBACCO, CANNABIS

Cannabis

1. Manthey J. **Cannabis use in Europe: Current trends and public health concerns**. Int J Drug Policy. 2019;68:93-6. Available from: http://www.sciencedirect.com/science/article/pii/S0955395919300611.
2. Posis A, Bellettiere J, Liles S, Alcaraz J, Nguyen B, Berardi V, et al. **Indoor cannabis smoke and children's health**. Preventive Medicine Reports. 2019;14:100853. Available from: http://www.sciencedirect.com/science/article/pii/S2211335519300385.

E-Cigarettes

1. Gaur S, Agnihotri R. **Health effects of trace metals in electronic cigarette aerosols—a systematic review**. Biol Trace Elem Res. 2019;188(2):295-315. Available from: https://link.springer.com/article/10.1007/s12011-018-1423-x.
2. Trigger S, Coleman B. Social Media Mentions of Electronic Nicotine Delivery Systems (ENDS) Battery-Related Overheating, Fires, and Explosions: Findings from a Pilot Study. Int J Environ Res Public Health. 2019;16(8):1308. Available from: http://www.mdpi.com/1660-4601/16/8/1308.
3. Visser WF, Klerx WN, Cremers HWJM, Ramlal R, Schwillens PL, Talhout R. **The Health Risks of Electronic Cigarette Use to Bystanders**. Int J Environ Res Public Health. 2019;16(9):1525. Available from: http://www.mdpi.com/1660-4601/16/9/1525.

WASTE

1. Cole-Hunter T, Cowie CT, Johnstone F, Marks GB, Morawska L, Morgan GG, et al. **Waste-to-Energy processes: what is the impact on air pollutants and health?** Sydney, AU: Queensland University of Technology and Centre for Air pollution, energy and health Research (CAR); 2019 Apr. Available from: https://eprints.qut.edu.au/127966/.

ZOONOSES

1. Bouchard C, Dibernardo A, Koffi J, Wood H, Leighton PA, Lindsay LR. **Increased risk of tick-borne diseases with climate and environmental changes**. Can Commun Dis Rep. 2019;45(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2019-45/issue-4-april-4-2019/article-2-increased-risk-tick-borne-diseases-climate-change.html.
2. CBC News. **Lyme Disease risk areas are up from last year: Public Health Ontario**. 2019 May 6. Available from: https://www.cbc.ca/news/canada/windsor/lyme-disease-risk-areas-ontario-up-2019-1.5124944.

3. Heylen D, Lasters R, Adriaensen F, Fonville M, Sprong H, Matthysen E. Ticks and tick-borne diseases in the city: Role of landscape connectivity and green space characteristics in a metropolitan area. Sci Total Environ. 2019;670:941-9. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30921726.
4. Liu Y, Nordone SK, Yabsley MJ, Lund RB, McMahan CS, Gettings JR. **Quantifying the relationship between human Lyme disease and Borrelia burgdorferi exposure in domestic dogs**. Geospat Health. 2019;14(1). Available from: https://www.ncbi.nlm.nih.gov/pubmed/31099521.
5. Ng V, Rees EE, Lindsay RL, Drebot MA, Brownstone T, Sadeghieh T, et al. **Could exotic mosquito-borne diseases emerge in Canada with climate change?** Can Commun Dis Rep. 2019;45(4). Available from: https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2019-45/issue-4-april-4-2019/article-4-exotic-mosquito-borne-diseases-climate-change.html.
6. Public Health Ontario. **New Ontario Lyme Disease map 2019. Estimated risk areas**. Toronto, ON: PHO; 2019 May. Available from: https://www.publichealthontario.ca/-/media/documents/lyme-disease-risk-area-map-2019.pdf?_cldee=bWljaGVsZS53aWVuc0BiY2NkYy5jYQ%3d%3d&recipientid=contact-c7ccc0a5b4a2e611837d0050569e0009-82f06c59b93a4c50b59daf7409382528&esid=723bef35-d97b-e911-ba45-0050569e0009.

For more on environmental health information and evidence, visit NCCEH.ca