2020 EH Scan

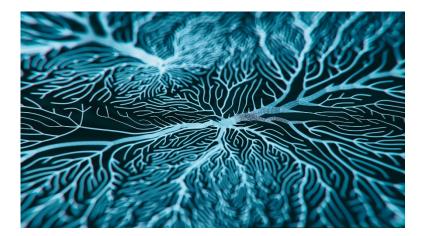


National Collaborating Centre for Environmental Health

Centre de collaboration nationale en santé environnementale

ENVIRONMENTAL HEALTH RESEARCH SCAN

WITH COVID-19 SECTIONS VOL 5 (1) JANUARY 2021



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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. **COVID-19 Publications** are listed in the sections above and there are also **COVID-19 Additional Topics** at the end of this issue.

EDITOR PICKS

Can CO2 sensors be used to assess COVID-19 transmission risk? [blog]

Angela Eykelbosh, NCCEH Knowledge Translation Scientist

"This blog looks at some of the evidence for the use of CO₂ sensors in assessing transmission risk and identifies potential pitfalls for further consideration."

Looking for COVID clues in our sewers [blog] Juliette O'Keeffe, NCCEH Knowledge Translation Scientist

"As methods in wastewater-based epidemiology (WBE) continue to be refined, work is now needed to understand how the data can best be used to complement public health efforts to control COVID-19. This document includes examples of potential applications of WBE in the current pandemic."

Death care during the COVID-19 pandemic: understanding the public health risks (forthcoming) Juliette O'Keeffe, NCCEH Knowledge Translation Scientist

"A rapid literature review was conducted in respect to the following research questions:

- What is the evidence on the persistence of SARS-CoV-2 virus on the surface of a corpse or in bodily tissues or fluids that may be encountered post-mortem?
- What is the evidence for transmission of SARS-CoV-2 from a deceased person to others?
- What is the evidence on incidence of COVID-19 infection or mortality among occupations that have direct contact with bodies of deceased person known to be infected with COVID-19?"

Health Resources for the COVID-19 Pandemic – updated [topic page] National Collaborating Centre for Environmental Health

NCCEH has prepared a specially curated topic page on Covid-19. Visit http://www.ncceh.ca/environmental-health-canada/ncceh-health-agency-project/desc

Use of Portable Air Cleaners and Transmission of COVID-19 Ontario Agency for Health Protection and Promotion (Public Health Ontario).

"This document is intended to be a technical resource on the use of a portable air cleaner where it is considered as a supportive measure to improve indoor air quality."















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ENVIRONMENTAL HEALTH RESEARCH SCAN

SELECTED STAFF PUBLICATIONS

NCCEH

- Eykelbosh A. Can CO2 sensors be used to assess COVID-19 transmission risk? [blog]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Jan 15. Available from: https://ncceh.ca/content/blog/can-co2-sensors-be-used-assess-covid-19-transmission-risk.
- National Collaborating Centre for Environmental Health. December research scan with COVID-19 sections [blog]. Vancouver, BC: NCCEH; 2020 Dec 16. Available from: <u>https://ccnse.ca/content/blog/decembre-survol-des-publications-du-ccnse-avec-section-covid-19</u>.
- National Collaborating Centre for Environmental Health. Environmental health resources for the COVID-19 pandemic - updated [topic page]. Vancouver, BC: National Collaborating Center for Environmental Health; 2021 Jan. Available from: <u>https://ncceh.ca/environmental-health-incanada/health-agency-projects/environmental-health-resources-covid-19</u>.
- National Collaborating Centre for Environmental Health. NCCEH eNews (December 2020): Outdoor Winter Dining during the COVID-19 Pandemic. Vancouver, BC: NCCEH; 2020 12 22 Dec. Available from: <u>https://tinyurl.com/y48uv8jx</u>.
- O'Keeffe J. Looking for COVID clues in our sewers [blog]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 01 15 Jan 15. Available from: <u>https://ncceh.ca/content/blog/looking-covid-clues-our-sewers</u>.
- O'Keeffe J. Death care during the COVID-19 pandemic: understanding the public health risks [field inquiry]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Jan 20. (forthcoming)

INDIGENOUS ENVIRONMENTAL HEALTH

- 1. Chatta S. Indigenous Owned and Operated Water Utility Launching Through New Partnership Model. Toronto, ON: Water Canada; 2020 Dec 14. Available from: <u>https://www.watercanada.net/indigenous-owned-and-operated-water-utility-launching-through-new-partnership-model/</u>.
- Irvine A, Schuster-Wallace C, Dickson-Anderson S, Bharadwaj L. Transferrable Principles to Revolutionize Drinking Water Governance in First Nation Communities in Canada. Water. 2020;12(11):3091. Available from: <u>https://www.mdpi.com/2073-4441/12/11/3091</u>.
- Newell SL, Dion ML, Doubleday NC. Cultural continuity and Inuit health in Arctic Canada. J Epidemiol Community Health. 2020;74(1):64-70. Available from: <u>https://www.ncbi.nlm.nih.gov/pubmed/31662343</u>.
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AGRICULTURAL OPERATIONS

 Weersink A, von Massow M, Bannon N, Ifft J, Maples J, McEwan K, et al. COVID-19 and the agri-food system in the United States and Canada. Agric Syst. 2021;188:103039. Available from: <u>https://www.ncbi.nlm.nih.gov/pubmed/33362333</u>.

BIOLOGICAL AGENTS

BUILT ENVIRONMENT

- Beliaev M, Bıyık E, Lazar DA, Wang WZ, Sadigh D, Pedarsani R. Incentivizing Routing Choices for Safe and Efficient Transportation in the Face of the COVID-19 Pandemic. ArXiv. 2020. Available from: <u>https://arxiv.org/abs/2012.15749</u>.
- Carpentieri G, Guida C, Fevola O, Sgambati S. The Covid-19 pandemic from the elderly perspective in urban areas: An evaluation of urban green areas in 10 European capitals - The city challenges and external agents. Methods, tools and best practices. LUME (Land Use, Mobility and Environment). 2020;13(3). Available from: <u>https://doi.org/10.6092/1970-9870/7007</u>.
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- Peters T, Halleran A. How our homes impact our health: using a COVID-19 informed approach to examine urban apartment housing. Archnet-IJAR: International Journal of Architectural Research. 2020;ahead-of-print(ahead-of-print). Available from: <u>https://doi.org/10.1108/ARCH-08-2020-0159</u>.
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CHEMICAL AGENTS – METALS, GENERAL

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- Arvaniti OS, Kalantzi O-I. Determinants of flame retardants in non-occupationally exposed individuals – A review. Chemosphere. 2021;263:N.PAG-N.PAG. Available from: <u>https://doi.org/10.1016/j.chemosphere.2020.127923</u>.
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- Liu W, Xin Y, Li Q, Shang Y, Ping Z, Min J, et al. Biomarkers of environmental manganese exposure and associations with childhood neurodevelopment: a systematic review and meta-analysis. Environ Health. 2020;19(1):104. Available from: <u>https://doi.org/10.1186/s12940-020-00659-x</u>.
- Rahman A, Sarkar A, Sathya J, McCrate F. Additional burden of cancers due to environmental carcinogens in Newfoundland and Labrador: a spatial analysis. Environ Health Rev. 2020;63(3):77-86. Available from: <u>https://pubs.ciphi.ca/doi/abs/10.5864/d2020-020</u>.
- US Environmental Protection Agency. Final Risk Evaluation for Perchloroethylene. Atlanta, GA: US EPA; 2020 Dec. Available from: <u>https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/final-risk-evaluation-perchloroethylene</u>.

CHEMICAL AGENTS – PESTICIDES

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CHEMICAL AGENTS – SHALE GAS

CHILDREN'S ENVIRONMENTAL HEALTH

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- 2. Ashley-Martin J, Dodds L, Arbuckle TE, Lanphear B, Muckle G, Foster WG, et al. **Urinary phthalates** and body mass index in preschool children: The MIREC Child Development Plus study. Int J Hyg Environ Health. 2021;232:113689. Available from: <u>https://www.ncbi.nlm.nih.gov/pubmed/33445101</u>.
- Du W, Yu J, Liu X, Chen H, Lin L, Li Q. Persistence of SARS-CoV-2 virus RNA in feces: A case series of children. Journal of infection and public health. 2020;13(7):926-31. Available from: <u>https://doi.org/10.1016/j.jiph.2020.05.025</u>.
- Elford S, Adams MD. Associations between socioeconomic status and ultrafine particulate exposure in the school commute: An environmental inequality study for Toronto, Canada. Environ Res. 2021;192:110224. Available from: <u>https://europepmc.org/article/med/32949617</u>.
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- Thygesen M, Engemann K, Holst GJ, Hansen B, Geels C, Brandt J, et al. The Association between Residential Green Space in Childhood and Development of Attention Deficit Hyperactivity Disorder: A Population-Based Cohort Study. Environ Health Perspect. 2020;128(12):127011. Available from: <u>https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP6729</u>.

CLIMATE CHANGE

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- Kenny T-A, Archambault P, Ayotte P, Batal M, Chan HM, Cheung W, et al. Oceans and human health—navigating changes on Canada's coasts. FACETS. 2020;5(1):1037-70. Available from: https://www.facetsjournal.com/doi/abs/10.1139/facets-2020-0035.
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COMMUNICABLE AND INFECTIOUS DISEASES

See Covid 19 subsections in this issue and in the <u>COVID-19 Additional Topics and Guidance</u> section at the end of this issue (e.g., Occupational Guidance, Transit, Transmission)

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DRINKING WATER

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- Falkinham JO. Living with Legionella and Other Waterborne Pathogens. Microorganisms. 2020;8(12):2026. Available from: <u>https://www.mdpi.com/2076-2607/8/12/2026</u>.
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EMERGENCY PREPAREDNESS

 Khalafzai M-AK, McGee TK, Parlee B. Frequent Flooding and Perceived Adaptive Capacity of Subarctic Kashechewan First Nation, Canada. Arctic. 2020;74(4):405-550 Available from: https://doi.org/10.14430/arctic71586.

ENVIRONMENTAL HEALTH SURVEILLANCE

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- NIOSH Science Blog. Collecting Occupation and Industry Data in Public Health Surveillance Systems for COVID-19. NIOSH; 2020 Jun 11. Available from: <u>https://blogs.cdc.gov/niosh-scienceblog/2020/06/11/covid-surveillance/</u>.
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ENVIRONMENTAL PLANNING

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FOOD

Safety

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11. Yale Environment 360. Mussels Sold in Grocery Stores Around the World Contain Microplastic Particles. 2020 Dec 17. Available from: <u>https://e360.yale.edu/digest/mussels-sold-in-grocery-stores-around-the-world-contain-microplastic-particles?ct=t(RSS_EMAIL_CAMPAIGN)</u>.

Security

- National Collaborating Centre for Methods and Tools. Rapid Review Update 1: Household food security in North America: What is the impact of COVID-19 and related public health measures? Hamilton, ON: McMaster University; 2020 Dec 18. Available from: <u>https://www.nccmt.ca/uploads/media/0001/02/c5c1eae24c2c1f6a248cbda880a5a736cf0ae36e.pdf</u>.
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HEALTH EQUITY

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COVID-19 ADDITIONAL TOPICS & GUIDANCE



CONTENTS

- <u>GUIDANCE</u> (cleaning, face masks, hand hygiene, policy, more)
- HOMELESS, VULNERABLE POPULATIONS, HOUSING
- MENTAL HEALTH
- <u>MULTI-UNIT BUILDINGS</u>
- OCCUPATIONAL GUIDANCE, MISC
- PUBLIC FACILITIES
- SURVIVAL TIME
- TRANSIT, TRANSPORTATION
- TRANSMISSION



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