

Centre de collaboration nationale en santé environnementale

ENVIRONMENTAL HEALTH RESEARCH SCAN

VOL 7 (9) SEPTEMBER 2023



 AIR QUALITY Indoor air Outdoor air Radon, Other 	CLIMATE CHANGE Extreme weather Flooding Sea level rise Wildfires, Other	DISEASES, VECTORS, PESTS <u>COVID-19</u> <u>Animal vectors</u> <u>Insect vectors</u> <u>Pests, Other</u>
 FOOD Food safety Food security Growing food, Other 	BUILT ENVIRONMENTGreen& blue spacesHousingNoisePlanning & designTransportation, Other	PUBLIC HEALTH FUNDAMENTALS • Communication • Health promotion • Health impact assessment • Health equity • One Health, Other
WATERDrinking waterRecreational waterSmall water systemsWastewater, Other	NON-CLIMATE RELATED DISASTERS Earthquakes Marine Terrestrial, Other	OTHER TOPICS • Cannabis products • Tobacco, nicotine products • Ionizing, non-ionizing radiation • Personal services establishments, Other
SPECIFIC POPULATIONS (children, Indigenous Peoples, older adults, other)		

Environmental Health (EH) Research Scan: Aims and Scope

EH Scan

NCCEH's EH Research Scan aims to expand awareness of topics in environmental health, in line with <u>NCCEH's vision</u> to be the indispensable online resource for environmental health practitioners and policy-makers across Canada. This research scan is not peer reviewed; it does not cover all research, news, and information, and NCCEH is not responsible for the accuracy of the content from media or databases. Not all links are open access; some are abstract links where paid journal subscription is required.

mortality, morbidity, and monetized costs [webinar]. Sep 28, 2023 @ 12-1 PT

able to identify key sectors influencing air quality and contributing to the air pollution health burden. Sector-attributed health impacts have been aggregated at" ... more

August 2023 Environmental health research scan. National Collaborating Centre for Environmental Health

"These monthly Research Scans highlight recent environmental health publications by topic and provides easy access to article abstracts and report summaries to support public health professionals."

August NCCEH e-news [newsletter]. National Collaborating Centre for Environmental Health

NCCEH's e-news showcases new publications. In the August issue, for example

- Pulsed electric fields: a potential alternative technology for parasite control in fish
- Preventing indoor heating
- Upcoming webinars

EDITOR PICKS

Urban rewilding and public health considerations [evidence brief]. Leah Rosenkrantz, Knowledge Translation Scientist, NCCEH

"Given the close proximity of dense population centers to urban rewilding initiatives, it is important to consider the ways in which urban rewilding might impact human health "

The health impacts of drought in Canada [subject guide].

National Collaborating Centre for Environmental Health

"The resources presented below provide information for monitoring and forecasting drought across Canada, as well as the connection between drought and human health. Finally, adaptation strategies for drought are also highlighted.'

Health impact assessment of air pollution in Canada: recent findings on Angelos T Anastasopolos and Mathieu Rouleau

"Modelling was applied consistently across examined sectors and therefore has been



National Collaborating Centre for Environmental Health

Centre de collaboration nationale en santé environnementale











Centre de collaboration nationale en santé environnementale

ENVIRONMENTAL HEALTH RESEARCH SCAN

SELECTED PUBLICATIONS

- 1. Casselman AS. **Canada in the year 2060**. Maclean's. 2023 Aug 11. Available from: <u>https://macleans.ca/society/environment/canada-in-the-year-2060/</u>.
- National Collaborating Centre for Environmental Health. August research scan. Vancouver, BC: NCCEH; 2023 Aug 23. Available from: <u>https://ncceh.ca/sites/default/files/2023-</u>08/NCCEH%20Research%20Scan%20-202308.pdf.
- National Collaborating Centre for Environmental Health. NCCEH eNews (August 2023): Pulsed electric fields: a potential alternative technology for parasite control in fish; more... Vancouver, BC: NCCEH; 2023 Aug 23. Available from: <u>https://app.cyberimpact.com/newsletterview-</u> opline2ct=HCp7dBNSVCeOvoDOuivYE7iifmiATpgG77SDVVcYPOOi, aagH8fOAH3BgOCkyHmBB7EE

online?ct=HCp7dBNSYCeQvoDQuivYEZiifmjATpgGZ7SDVYcYPOOi_aaqH8fQAH3RgOCkyHmBB7FE NUQIeUqssjJqdQOxnQ~~.

- National Collaborating Centre for Environmental Health. The health impacts of drought in Canada [topic page]. Vancouver, BC: NCCEH; 2023 Sep 8. Available from: <u>https://ncceh.ca/resources/subject-guides/health-impacts-drought-canada</u>.
- Rosenkrantz L. Urban rewilding and public health considerations [evidence brief]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2023 Aug 31. Available from: <u>https://ncceh.ca/resources/evidence-briefs/urban-rewilding-and-public-health-considerations</u>.

1. AIR QUALITY

INDOOR AIR

- Andersen HV, Bramming Jørgensen R, Gunnarsen L. Impact of smoking and candle burning on air concentrations of PCB in a PCB contaminated indoor environment. Atmos Environ. 2023;309. Available from: <u>https://doi.org/10.1016/j.atmosenv.2023.119922</u>.
- Laursen KR, Christensen NV, Mulder FAA, Schullehner J, Hoffmann HJ, Jensen A, et al. Airway and systemic biomarkers of health effects after short-term exposure to indoor ultrafine particles from cooking and candles – A randomized controlled double-blind crossover study among mild asthmatic subjects. Particle Fibre Toxicol. 2023;20(1):26. Available from: https://doi.org/10.1186/s12989-023-00537-7.
- 3. UK Government Housing & Communities. Understanding and addressing the health risks of damp and mould in the home. London, UK: UK Government; 2023 09 07 Sep 7. Available from: <u>https://www.gov.uk/government/publications/damp-and-mould-understanding-and-</u>



Centre de collaboration nationale en santé environnementale

addressing-the-health-risks-for-rented-housing-providers/understanding-and-addressing-the-health-risks-of-damp-and-mould-in-the-home--2.

OUTDOOR AIR

 Feng Y, Liu X, Zhang X, Zhao X, Chang H, Ouyang F, et al. Global air pollution exposure and congenital anomalies: an updated systematic review and meta-analysis of epidemiological studies. Int J Environ Health Res. 2023:1-20. Available from: <u>https://doi.org/10.1080/09603123.2023.2246383</u>.

RADON, OTHER

 Timmons S, Lunn PD. Using information provision and interactive risk maps to motivate testing for radon. J Environ Psychol. 2023;89:102057. Available from: <u>https://www.sciencedirect.com/science/article/pii/S0272494423001056</u>.

2. FOOD

FOOD SAFETY

- Harris R, Tchao C, Prystajecky N, Weedmark K, Tcholakov Y, Lefebvre M, Austin J. Foodborne Botulism, Canada, 2006–2021. Emerging Infectious Disease journal. 2023;29(9):1730. Available from: <u>https://wwwnc.cdc.gov/eid/article/29/9/23-0409_article</u>.
- Obande D, Pear DL, Young I, Papadopoulos A. Identifying predictors of safe food handling practices among Canadian households with children under eighteen years. Food Prot Trends. 2023;43(5):391-408. Available from: <u>https://www.foodprotection.org/publications/food-protection-trends/archive/2023-09-identifying-predictors-of-safe-food-handling-practices-among-canadian-householdswithchildre/#:~:text=Approximately%2090%25%20of%20caregivers%20reported,%25)%20and% 20hamburgers%20(11%25).
 </u>

FOOD SECURITY

 Robillard P, Sekercioglu F, Edge S, Young I. Resilience in the face of crisis: investigating COVID-19 impacts on urban community gardens in Greater Toronto Area, Canada. Brit Food J. 2023;ahead-of-print(ahead-of-print). Available from: <u>https://doi.org/10.1108/BFJ-02-2023-0179</u>.



GROWING FOOD, OTHER

- Armstrong TR, Fisk J, Hand K, Khanna S. Canadian agri-food resilience: a toolbox for managing crises. Ottawa, ON: Canadian Agri-food Policy Institute; 2023 Sep. Available from: <u>https://capiicpa.ca/wp-content/uploads/2023/09/2023-09-13-Canadian-Agri-Food-Resilience-CAPI-EN.pdf</u>.
- Betteridge A. Harmonizing agricultural growth and nighttime sky: municipal strategies for mitigating commercial greenhouse-related light pollution in Ontario, Canada. London, ON: Western University; 2023 Jul. Available from: <u>https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1240&context=lgp-mrps</u>.
- 3. Environmental Health News Staff. LISTEN: Bruce Lanphear on how we're failing to protect people from pesticides. Environmental Health News; 2023 Sep 11. Available from: <u>https://www.ehn.org/pesticide-regulation-</u> <u>2664943723.html?vgo_ee=RInWHJjFE5M%2BUck0Fwp6%2FiMwDD2hpgprnc7QF3Mfg9ShsVMy</u> s%2Bs%3D%3Aeykp33Sc3RvZ673jv7BFy%2BGdL7gU5o0d.

3. WATER

DRINKING WATER

 Balasooriya BMJK, Rajapakse J, Gallage C. A review of drinking water quality issues in remote and indigenous communities in rich nations with special emphasis on Australia. Sci Total Environ. 2023;903:166559. Available from: https://www.sciencedirect.com/science/article/pii/S0048969723051847.

RECREATIONAL WATER

SMALL WATER SYSTEMS

WASTEWATER, OTHER

 Health Canada. COVID-19 wastewater surveillance dashboard. Ottawa, ON: Health Canada; 2023. Available from: <u>https://health-infobase.canada.ca/covid-19/wastewater/</u>.

4. CLIMATE CHANGE



Centre de collaboration nationale en santé environnementale

EXTREME WEATHER

- Bakos K, Feltmate B. Transitioning from rhetoric to action: integrating physical climate change and extreme weather risk into institutional investing. University of Waterloo: Intact Centre on Climate Adaptation; 2023 Jul. Available from: <u>https://www.intactcentreclimateadaptation.ca/integrating-physical-climate-change-risk-intoinstitutional-investing/</u>.
- Bakos K, Feltmate B. Three ways to reduce climate risk. working with nature at home. University of Waterloo: Intact Centre on Climate Adaptation; 2023 Sep. Available from: <u>https://www.intactcentreclimateadaptation.ca/wp-content/uploads/2023/08/IntactCentre-</u> <u>Working_with_Nature_at_Home.pdf</u>.
- City of Nanaimo. Summary and recommendations final report. extreme heat mapping, assessment, and planning. Nanaimo, BC: City of Nanaimo; 2023 Aug 9. Available from: <u>https://www.nanaimo.ca/docs/social-culture-environment/community-social-service-programs/20230809 neh final report.pdf</u>.
- Cornwall W. Schizophrenia pinpointed as a key factor in heat deaths. Science. 2023 03 15. Available from: <u>https://www.science.org/content/article/schizophrenia-pinpointed-key-factor-heatdeaths?itid=lk_inline_enhanced-template</u>.
- Dorji T, Morrison-Saunders A, Blake D. Understanding how community wellbeing is affected by climate change: evidence from a systematic literature review. Environ Manage. 2023;72(3):568-86. Available from: <u>https://doi.org/10.1007/s00267-023-01833-w</u>.
- 6. Marlow K. Vancouver Island town considers bylaw to help keep rental units cool in summer. CBC News. 2023 Sep 7. Available from: <u>https://www.cbc.ca/news/canada/british-columbia/b-c-town-mulling-bylaw-to-keep-rental-units-cool-in-summer-1.6958807</u>.
- National Collaborating Centre for Environmental Health. The health impacts of drought in Canada [topic page]. Vancouver, BC: NCCEH; 2023 Sep 8. Available from: <u>https://ncceh.ca/resources/subject-guides/health-impacts-drought-canada</u>.
- Ontario Ministry of Energy and Environment. Ontario provincial climate change impact assessment technical report. Toronto, ON: Government of Ontario; 2023 Jan. Available from: <u>https://www.ontario.ca/files/2023-08/mecp-ontario-provincial-climate-change-impact-assessment-en-2023-08-17.pdf</u>.
- Osaka S, O'Connor EP, Muyskens J. The human limit. Heat's hidden risk. The Washington Post. 2023 09 06 Sep 6. Available from: <u>https://www.washingtonpost.com/climate-</u> <u>environment/interactive/2023/schizophrenia-extreme-heat-health-risk/</u>.
- 10. Oxfam UK. Climate Crisis: What is it, why is it happening, how does it affect us all, and what can you do?: Oxfam GB; 2023. Available from: <u>https://policycommons.net/artifacts/4774648/oxfam-climate-crisis-ebook/</u>.
- 11. Public Health Agency of Canada Western Region, BC Centre for Disease Control. **Building hope through climate change action: BC case studies report**. Ottawa, ON and Vancouver, BC: Public Health Agency of Canada Western Region & BC Centre for Disease Control; 2023 Jun. Available from: <u>https://media2-production.mightynetworks.com/asset/41125518-986e-4bbd-bd54-</u> <u>cc61bc7f5960/Building Hope_Through_Climate_Action.pdf? gl=1*1xo8fjk* ga*MTY1NTkwNTU</u>



Centre de collaboration nationale en santé environnementale

<u>yMy4xNjg5NjIwMTc0* ga_T49FMYQ9FZ*MTY5Mjk3MzIzMi4xNS4xLjE2OTI5NzMyODEuMC4wLj</u> <u>A</u>.

- 12. Tait P. **Hot weather, heat warning, or extreme heat emergency?** Prince George, BC: Northern Health Authority, Northern Health Stories; 2023 08 16 Aug 16. Available from: <u>https://stories.northernhealth.ca/stories/hot-weather-heat-warning-or-extreme-heat-emergency</u>.
- Tetzlaff EJ, Goulet N, Gorman M, Ioannou LG, Kenny GP. Working under the 2021 Heat Dome: A Content Analysis of Occupational Impacts Mentioned in the Canadian Media. Healthcare. 2023;11(17):2423. Available from: <u>https://www.mdpi.com/2227-9032/11/17/2423</u>.
- Tetzlaff EJ, Goulet N, Gorman M, Richardson GRA, Kenny GP. The Intersection of the COVID-19 Pandemic and the 2021 Heat Dome in Canadian Digital News Media: A Content Analysis. Int J Environ Res Public Health. 2023;20(17):6674. Available from: <u>https://www.mdpi.com/1660-4601/20/17/6674</u>.
- 15. US Climate Resilience Tookit. **Case studies**. US Climate Resilience Tookit; 2023. Available from: <u>https://toolkit.climate.gov/#case-studies</u>.
- 16. Vicedo-Cabrera AM, Melén E, Forastiere F, Gehring U, Katsouyanni K, Yorgancioglu A, et al. Climate change and respiratory health: a European Respiratory Society position statement. Eur Respir J. 2023;62(2):2201960. Available from: https://erj.ersjournals.com/content/erj/62/2/2201960.full.pdf.
- 17. Woo A. B.C. to require all new homes have a temperature-controlled room. Toronto, ON: The Globe and Mail; 2023 Aug 17. Available from: <u>https://www.theglobeandmail.com/amp/canada/british-columbia/article-bc-to-require-all-new-homes-have-a-temperature-controlled-room/.</u>
- 18. World Health Organization. Basic training on environment, climate change and health. Online course for practitioners and actors influencing policy change. Geneva, Switzerland: WHO; 2023. Available from: <u>https://www.who.int/teams/environment-climate-change-and-health/training/basic/</u>.

FLOODING

- 1. Alberta Water Portal Society. **Social impacts of flooding**. Calgary, AB: Alberta Water; 2023 Sep 8. Available from: <u>https://albertawater.com/what-are-the-consequences-of-flooding/social/</u>.
- Eyquem J. Managing flooding and erosion at the watershed-scale: guidance to support governments using nature-based solutions. Toronto, ON: Canadian Standards Association; 2023 Apr. Available from: <u>https://www.csagroup.org/article/research/managing-flooding-anderosion-at-the-watershed-scale/</u>.
- Klassen C, Tatla I, Raible C, Jessiman DL, Beaulieu L. After the flood. community response & recovery. City of Abbotsford. Abbotsford, BC: University of the Fraser Valley, Community Health and Social Innovation Hub; 2023 Apr. Available from: https://drive.google.com/file/d/1WG4d1hMAFQEY2cFImNepS-a1tl3cvj8l/view.



Centre de collaboration nationale en santé environnementale

SEA LEVEL RISE

WILDFIRES, OTHER

- Allen RW, Cleland S. Wildfire smoke is an increasing threat to Canadians' health. The Conversation. 2023. Available from: <u>https://theconversation.com/wildfire-smoke-is-an-increasing-threat-to-canadians-health-</u> 211411#:~:text=There%20is%20strong%20evidence%20that,cardiovascular%20system%20is%20 also%20growing..
- FireSmart Canada, Canada Wildfire, Intact Centre on Climate Adaptation, Intellifeu Canada. Wildfireresilience best-practice checklist for home construction, renovation and landscaping. University of Waterloo: Intact Centre on Climate Adaptation; 2023. Available from: <u>https://www.intactcentreclimateadaptation.ca/wp-</u> content/uploads/2022/02/FSC ConstructionChecklist_FINAL.pdf.
- Lowe SR, Garfin DR. Crisis in the air: the mental health implications of the 2023 Canadian wildfires. The Lancet Planetary Health. 2023;7(9):e732-e3. Available from: <u>https://doi.org/10.1016/S2542-5196(23)00188-2</u>.
- Public Health Agency of Canada. Wildfires in Canada. Toolkit for public health authorities. Ottawa, ON: Public Health Agency of Canada; 2023 08 08 Aug 8. Available from: <u>https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/wildfires-canada-toolkit-public-health-authorities/wildfires-canada-toolkit-public-health-au</u>
- Tuolumne County. Safe cleanup of fire ash. Tuolumne County: State of California; 2023. Available from: <u>https://www.tuolumnecounty.ca.gov/DocumentCenter/View/22750/safe-cleanup-fire-ash-1</u>.

5. BUILT ENVIRONMENT

GREEN & BLUE SPACES

- Dzhambov AM, Lercher P, Vincens N, Persson Waye K, Klatte M, Leist L, et al. Protective effect of restorative possibilities on cognitive function and mental health in children and adolescents: A scoping review including the role of physical activity. Environ Res. 2023;233: Available from: <u>https://doi.org/10.1016/j.envres.2023.116452</u>.
- Elliott LR, Pasanen T, White MP, Wheeler BW, Grellier J, Cirach M, et al. Nature contact and general health: Testing multiple serial mediation pathways with data from adults in 18 countries. Environ Int. 2023;178:108077. Available from: https://www.sciencedirect.com/science/article/pii/S0160412023003501.

VOL7 (9) September 2023



Centre de collaboration nationale en santé environnementale

- 3. George DR, Ethridge AE. Hospital-Based Community Gardens as a Strategic Partner in Addressing Community Health Needs. Am J Public Health. 2023;113(9):939-42. Available from: https://doi.org/10.2105/ajph.2023.307336.
- 4. Hunter RF, Nieuwenhuijsen M, Fabian C, Murphy N, O'Hara K, Rappe E, et al. Advancing urban green and blue space contributions to public health. The Lancet Public Health. 2023;8(9):e735-e42. Available from: https://doi.org/10.1016/S2468-2667(23)00156-1.
- 5. Selanon P, Chuangchai W. The Importance of Urban Green Spaces in Enhancing Holistic Health and Sustainable Well-Being for People with Disabilities: A Narrative Review. Buildings. 2023;13(8):2100. Available from: https://www.mdpi.com/2075-5309/13/8/2100.
- 65. Rosenkrantz L. Urban rewilding and public health considerations [evidence brief]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2023 Aug 31. Available from: https://ncceh.ca/resources/evidence-briefs/urban-rewilding-and-public-health-considerations.
- 7. Yin Y, Shao Y, Wang Y, Wu L. Developing a Pocket Park Prescription Program for Human Restoration: An Approach That Encourages Both People and the Environment. Int J Environ Res Public Health. 2023;20(17):6642. Available from: https://www.mdpi.com/1660-4601/20/17/6642.

HOUSING

NOISE, GENERAL

- 1. Raabus C. Does white noise really help you learn and can brown noise 'turn off' your brain? ABC News Australia. 2023 Sep 11. Available from: https://www.abc.net.au/news/2023-09-11/whitenoise-brown-noise-are-sonic-hues-good-for-us/102814968.
- 2. Rashidfarokhi A, Danivska V. Managing crises 'together': how can the built environment contribute to social resilience? Building Res Inform. 2023;51(7):747-63. Available from: https://doi.org/10.1080/09613218.2023.2191922.
- 3. Rosenkrantz L, Schuurman N. Applications of GIScience to disease mapping. A COVID-19 case study. In: Kent AJ, Specht D, editors. The Routledge Handbook of Geospatial Technologies and Society. London, UK: Routledge; 2023 06 01. Available from: https://www.taylorfrancis.com/chapters/edit/10.4324/9780367855765-37/applicationsgiscience-disease-mapping-leah-rosenkrantz-nadine-schuurman.
- 4. Vine MM, Mulligan K, Harris R, Dean JL. The impact of health geography on public health research, policy, and practice in Canada. Int J Environ Res Public Health. 2023;20(18):6735. Available from: https://www.mdpi.com/1660-4601/20/18/6735.
- 5. Yu X, Jarvis I, Davis Z, van den Bosch M, Davies H. Reductions in community noise levels in Vancouver, Canada, during pandemic lockdown and association with land cover type. Environ Res. 2023:117064. Available from:

https://www.sciencedirect.com/science/article/pii/S0013935123018686.



PLANNING & DESIGN

- Mata L, Hahs AK, Palma E, Backstrom A, Johnston N, King T, et al. Large positive ecological changes of small urban greening actions. Ecological Solutions and Evidence. 2023;4(3):e12259. Available from: <u>https://besjournals.onlinelibrary.wiley.com/doi/abs/10.1002/2688-8319.12259</u>.
- McEntee ML, Hurley JC, Phillips CB, Hooker SP, Todd M, Frank LD, Adams MA. The moderating impact of neighborhood walkability on mHealth interventions to increase moderate to vigorous physical activity for insufficiently active adults in a randomized trial. Int J Behav Nutr Phys Act. 2023;20(1):97. Available from: <u>https://doi.org/10.1186%2Fs12966-023-01494-2</u>.
- Pan H, Page J, Shi R, Cong C, Cai Z, Barthel S, et al. Contribution of prioritized urban nature-based solutions allocation to carbon neutrality. Nature Climate Change. 2023;13(8):862-70. Available from: <u>https://doi.org/10.1038/s41558-023-01737-x</u>.
- Quintiliani LM, Dedier J, Amezquita M, Sierra-Ruiz M, Romero D, Murillo J, et al. Community Walks: a cluster randomized controlled trial of a multilevel physical activity intervention for low income public housing residents. BMC Public Health. 2023;23(1):1676. Available from: https://doi.org/10.1186/s12889-023-16574-y.
- Wolf ID, Waitt G. Towards liveable cities: A review of ethnicity, public urban nature space and wellbeing. AMBIO - A Journal of the Human Environment. 2023;52(9):1505-18. Available from: <u>https://link.springer.com/article/10.1007/s13280-023-01871-y</u>.

TRANSPORTATION, OTHER

- Aghaabbasi M, Chalermpong S. A meta-analytic review of the association between the built environment and integrated usage of rail transport and bike-sharing. Transportation Research Interdisciplinary Perspectives. 2023;21:100860. Available from: <u>https://www.sciencedirect.com/science/article/pii/S2590198223001070</u>.
- Litman T. Evaluating active transport benefits and costs. Victoria, BC: Victoria Transport Policy Institute; 2023 Aug 23. Available from: <u>https://www.vtpi.org/nmt-tdm.pdf</u>.

6. NON-CLIMATE RELATED DISASTERS

EARTHQUAKES

MARINE



TERRESTRIAL, OTHER

 Futterman ID, Grace H, Weingarten S, Borjian A, Clare CA. Maternal anxiety, depression and posttraumatic stress disorder (PTSD) after natural disasters: a systematic review. J Matern Fetal Neonatal Med. 2023;36(1):1-18. Available from: <u>https://doi.org/10.1080/14767058.2023.2199345</u>.

7. DISEASES, VECTORS, PESTS

COVID-19

- Antonova L, Somayaji C, Cameron J, Sirski M, Sundaram ME, McDonald JT, et al. Comparison of socio-economic determinants of COVID-19 testing and positivity in Canada: A multi-provincial analysis. PLoS ONE. 2023;18(8):e0289292. Available from: https://doi.org/10.1371/journal.pone.0289292.
- Brean J. Everything we know about Pirola, the new COVID variant in Canada and around the world. National Post. 2023 Aug 30. Available from: <u>https://nationalpost.com/news/canada/pirola-covid-variant</u>.
- CBC News. 1st Canadian case of highly mutated COVID-19 virus variant BA.2.86 detected in B.C. 2023 Aug 29. Available from: <u>https://www.cbc.ca/news/canada/british-columbia/covid-variant-first-canadian-case-bc-1.6951185</u>.
- Ebrahimi T, Shamshiri AR, Alebouyeh M, Mohebbi SZ. Effectiveness of mouthwashes on reducing SARS-CoV-2 viral load in oral cavity: a systematic review and meta-analysis. BMC Oral Health. 2023;23(1):443. Available from: <u>https://doi.org/10.1186/s12903-023-03126-4</u>.
- Huang R, Ma C, Huangfu X, Ma J. Preparing for the Next Pandemic: Predicting UV Inactivation of Coronaviruses with Machine Learning. Environ Sci Tech. 2023. Available from: <u>https://doi.org/10.1021/acs.est.3c03707</u>.
- Hui KPY, Chin AWH, Ehret J, Ng K-C, Peiris M, Poon LLM, et al. Stability of SARS-CoV-2 on Commercial Aircraft Interior Surfaces with Implications for Effective Control Measures. Int J Environ Res Public Health. 2023;20(16):6598. Available from: <u>https://www.mdpi.com/1660-4601/20/16/6598</u>.
- Nash C. Scoping Review of Handwashing and OCD During COVID-19 Concerning Increased Negative Mental Health. Preprints. 2023. Available from: https://www.preprints.org/manuscript/202308.0740/v1.
- Noorimotlagh Z, Mirzaee SA, Seif F, Kalantar M, Roghani T, Mousavi SA, Honarmandpour A. Detection of different variants of SARS-CoV-2 RNA (genome) on inanimate surfaces in hightouch public environmental surfaces. Sci Rep. 2023;13(1):13058. Available from: <u>https://doi.org/10.1038/s41598-023-40342-y</u>.
- Public Health Ontario. Coronavirus Disease 2019 (COVID-19). Toronto, ON: Public Health Ontario; 2023 09 05 Sep. Available from: <u>https://www.publichealthontario.ca/-</u> /media/documents/ncov/ncov-daily-lit.pdf?la=en.



Centre de collaboration nationale en santé environnementale

- 10. Public Health Ontario. **Ontario respiratory virus tool**. Toronto, ON: Public Health Ontario; 2023. Available from: <u>https://www.publichealthontario.ca/en/Data-and-Analysis/Infectious-Disease/Respiratory-Virus-Tool</u>.
- 11. Russell T, Macori G, Russell L, Mulcahy G, Sammin D, Fanning S, Barry G. Persistence and recovery of SARS-CoV-2 from abiotic and biotic surfaces found in meat processing plants. Journal of Food Safety. 2023:e13086. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/jfs.13086.
- 12. US Centers for Disease Control and Prevention. **COVID-19 Classifications & Definitions**. Atlanta, GA: US CDC; 2023 Aug. Available from: <u>https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-classifications.html</u>.
- Wong WM, Wang X, Wang Y. The intersection of COVID-19 and air pollution: A systematic literature network analysis and roadmap for future research. Environ Res. 2023;237:116839. Available from: <u>https://www.sciencedirect.com/science/article/pii/S0013935123016432</u>.
- 14. Zhang J, Lim YH, So R, Jørgensen JT, Mortensen LH, Napolitano GM, et al. Long-term exposure to air pollution and risk of SARS-CoV-2 infection and COVID-19 hospitalisation or death: Danish nationwide cohort study. Eur Respir J. 2023;62(1). Available from: https://doi.org/10.1183/13993003.00280-2023.

ANIMAL VECTORS

INSECT VECTORS

PESTS, OTHER

- Council of Canadian Academies. Overcoming Resistance. The Expert Panel on Antimicrobial Availability. Ottawa, ON: CCA; 2023 Sep 7. Available from: <u>https://www.cca-reports.ca/</u>.
- European Polar Board. Upcoming issues of importance. Avian influenza. The Hague, The Netherlands: European Polar Board; 2023 09 11. Available from: https://www.europeanpolarboard.org/communications/upcoming-issues-of-importance/.
- 3. Gavotte L, Gaucherel C, Frutos R. **Environmental spillover of emerging viruses: Is it true?** Environ Res. 2023;233:N.PAG-N.PAG. Available from: <u>https://doi.org/10.1016/j.envres.2023.116416</u>.
- Hamers RL, Dobreva Z, Cassini A, Tamara A, Lazarus G, Asadinia KS, et al. Global knowledge gaps on antimicrobial resistance in the human health sector: A scoping review. Int J Infect Dis. 2023;134:142-9. Available from: <u>https://doi.org/10.1016/j.ijid.2023.06.004</u>.
- 5. Health Canada. **Mosquito-borne disease surveillance: Seasonal update**. Ottawa, ON: Government of Canada; 2023. Available from: <u>https://health-infobase.canada.ca/zoonoses/mosquito/</u>.



8. PUBLIC HEALTH FUNDAMENTALS

COMMUNICATION

 George JO, Elayan S, Sykora M, Solter M, Feick R, Hewitt C, et al. The Role of Social Media in Building Pandemic Resilience in an Urban Community: A Qualitative Case Study. Int J Environ Res Public Health. 2023;20(17):6707. Available from: <u>https://www.mdpi.com/1660-</u> 4601/20/17/6707.

HEALTH PROMOTION

HEALTH IMPACT ASSESSMENT

 National Academies of Sciences Engineering and Medicine. Building confidence in new evidence streams for human health risk assessment: lessons learned from laboratory mammalian toxicity tests. Washington, DC: The National Academies Press; 2023. Available from: <u>https://nap.nationalacademies.org/catalog/26906/building-confidence-in-new-evidencestreams-for-human-health-risk-assessment</u>.

HEALTH EQUITY

- Gudi-Mindermann H, White M, Roczen J, Riedel N, Dreger S, Bolte G. Integrating the social environment with an equity perspective into the exposome paradigm: A new conceptual framework of the Social Exposome. Environ Res. 2023;233:N.PAG-N.PAG. Available from: <u>https://doi.org/10.1016/j.envres.2023.116485</u>.
- National Collaborating Centre for Determinants of Health. Health equity frameworks as a tool to support public health action: A rapid review of the literature. Antigonish, NS: NCCDH, St. Francis Xavier University; 2023. Available from: https://nccdh.ca/images/uploads/NCCDH Health Equity Frameworks Review EN.pdf.
- Pagani A, Christie D, Bourdon V, Gago CW, Joost S, Licina D, et al. Housing, street and health: a new systemic research framework. Buildings and Cities. 2023. Available from: <u>https://journal-buildingscities.org/articles/10.5334/bc.298</u>.

ONE HEALTH, OTHER

 Janke N, Stone EA, Coe JB, Dewey CE. Companion animal veterinarians discuss aspects of one health with pet owners during most veterinary appointments. J Am Vet Med Assoc. 2023:1-9. Available from:

https://avmajournals.avma.org/view/journals/javma/aop/javma.23.05.0287/javma.23.05.0287. <u>xml</u>.



Centre de collaboration nationale en santé environnementale

- 2. OECD. Embracing a One Health Framework to Fight Antimicrobial Resistance2023. Available from: https://www.oecd-ilibrary.org/content/publication/ce44c755-en.
- 3. University of Guelph. **Bachelor of One Health program**. Guelph, ON: University of Guelph; 2023. Available from: <u>https://www.uoguelph.ca/programs/bachelor-of-one-health-boh/</u>.

9. OTHER TOPICS

CANNABIS PRODUCTS

- Fataar F, Driezen P, Owusu-Bempah A, Hammond D. Patterns of problematic cannabis use in Canada pre- and post-legalisation: Differences by neighbourhood deprivation, individual socioeconomic factors and race/ethnicity. Drug Alcohol Rev. 2023;42(6):1534-46. Available from: <u>https://onlinelibrary.wiley.com/doi/abs/10.1111/dar.13677</u>.
- Wickelgren I. Smoke alarm. As states relax their laws on cannabis, neuroscientist Yasmin Hurd is warning about the drug's dangers for the developing brain. Science. 2023. Available from: <u>https://www.science.org/content/article/cannabis-laws-relax-neuroscientist-warns-its-dangersdeveloping-brain</u>.

TOBACCO, NICOTINE PRODUCTS

- Chief Health Officer Queensland, Queensland Health Forensic and Scientific Services. Vaping: An inquiry into reducing rates of e-cigarette use in Queensland. Report No. 38. Queensland: Australia Parliament Health and Environment Committee; 2023 Aug. Available from: <u>https://documents.parliament.qld.gov.au/tp/2023/5723T1212-BEB3.pdf</u>.
- Fraser SG. Vaping: the epidemic that isn't hidden. BMJ. 2023;382:p1904. Available from: <u>https://www.bmj.com/content/bmj/382/bmj.p1904.full.pdf</u>.
- 3. Tackling Smoking Australia. **Passive Vaping**. Tobacco Control News Research roundup. 2023. Available from: <u>https://tacklingsmoking.org.au/wp-content/uploads/sites/5/2023/08/Tobacco-Control-News-August-2023.pdf</u>.
- 4. Yan D, Wang Z, Laestadius L, Mosalpuria K, Wilson FA, Yan A, et al. A systematic review for the impacts of global approaches to regulating electronic nicotine products. Journal of Global Health. 2023. Available from: <u>https://jogh.org/2023/jogh-13-04076</u>.

IONIZING, NON-IONIZING RADIATION

 Brzozek C, Karipidis K. Community engagement programs on radiation and health: addressing public concerns. Public Health Research & Practice. 2023. Available from: <u>https://www.phrp.com.au/issues/september-2023-volume-33-issue-3/community-engagement-programs-on-radiation-and-health-addressing-public-concerns/</u>.



PERSONAL SERVICES ESTABLISHMENTS, OTHER (e.g., microplastics, chemicals, metals)

- Bihari E, Grewal G, Richter DD. Legacies of Pre-1960s Municipal Waste Incineration in the Pb of City Soils. Environ Sci Technol Lett. 2023. Available from: https://doi.org/10.1021/acs.estlett.3c00488.
- Boisacq P, De Keuster M, Prinsen E, Jeong Y, Bervoets L, Eens M, et al. Assessment of poly- and perfluoroalkyl substances (PFAS) in commercially available drinking straws using targeted and suspect screening approaches. Food Additives & Contaminants: Part A. 2023;40(9):1230-41. Available from: <u>https://doi.org/10.1080/19440049.2023.2240908</u>.
- Bouredji A, Pourchez J, Forest V. Biological effects of Tire and Road Wear Particles (TRWP) assessed by in vitro and in vivo studies – A systematic review. Sci Total Environ. 2023;894:N.PAG-N.PAG. Available from: <u>https://doi.org/10.1016/j.scitotenv.2023.164989</u>.
- Gaspar L, Bartman S, Coppotelli G, Ross JM. Acute Exposure to Microplastics Induced Changes in Behavior and Inflammation in Young and Old Mice. Int J Mol Sci. 2023;24(15):12308. Available from: <u>https://www.mdpi.com/1422-0067/24/15/12308</u>.
- Larsen B, Sánchez-Triana E. Global health burden and cost of lead exposure in children and adults: a health impact and economic modelling analysis. The Lancet Planetary Health. 2023. Available from: <u>https://doi.org/10.1016/S2542-5196(23)00166-3</u>.
- Packull-McCormick S, Ashley-Martin J, Singh K, Fisher M, Arbuckle TE, Lanphear B, et al. Prenatal and concurrent blood mercury concentrations and associations with IQ in canadian preschool children. Environ Res. 2023;233:N.PAG-N.PAG. Available from: https://doi.org/10.1016/j.envres.2023.116463.
- Quang HHP, Dinh DA, Dutta V, Chauhan A, Lahiri SK, Gopalakrishnan C, et al. Current approaches, and challenges on identification, remediation and potential risks of emerging plastic contaminants: A review. Environmental Toxicology & Pharmacology. 2023;101. Available from: <u>https://doi.org/10.1016/j.etap.2023.104193</u>.
- Zuri G, Karanasiou A, Lacorte S. Human biomonitoring of microplastics and health implications: A review. Environ Res. 2023;237:116966. Available from: <u>https://www.sciencedirect.com/science/article/pii/S001393512301770X</u>.

OTHER

- 1. Dalvi APR, Dias RM, Junger WL. **ChatGPT in the health sciences: pause and ponder**. Environ Health. 2023;22(1):64. Available from: <u>https://doi.org/10.1186/s12940-023-01014-6</u>.
- Scotland Minister for Public Health and Women's Health. Alkaline hydrolysis ('water cremation') regulation in Scotland. Scotland: Government of Scotland; 202308 25 Aug 25. Available from: <u>https://www.gov.scot/publications/alkaline-hydrolysis-water-cremation-regulation-scotland/pages/10/</u>.



Centre de collaboration nationale en santé environnementale

3. Turns A. **The gold jewellery made from old phones**. London, UK: BBC Future Planet; 2023 Sep 5. Available from: <u>https://www.bbc.com/future/article/20230904-how-the-royal-mint-is-turning-electronic-waste-into-gold</u>.

10. SPECIFIC POPULATIONS

CHILDREN

- Cohen-Eliraz L, Ornoy A, Ein-Mor E, Bar-Nitsan M, Pilowsky Peleg T, Calderon-Margalit R. Prenatal exposure to phthalates and emotional/behavioral development in young children. Neurotoxicology. 2023;98:39-47. Available from: https://www.sciencedirect.com/science/article/pii/S0161813X2300102X.
- DeSerisy M, Cohen JW, Dworkin JD, Stingone JA, Ramphal B, Herbstman JB, et al. Early life stress, prenatal secondhand smoke exposure, and the development of internalizing symptoms across childhood. Environ Health. 2023;22(1):58. Available from: <u>https://doi.org/10.1186/s12940-023-01012-8</u>.
- Doma H, Tran T, Romero L, Makleff S, Krishna RN, Varshney K, Fisher J. Effects of natural hazards on early childhood development: a systematic review protocol. BMJ open. 2023;13(6):e070068. Available from: <u>https://bmjopen.bmj.com/content/13/6/e070068</u>.
- Maleki S, Hagelman Iii RR, Lavy BL. Neighborhood child friendliness: a comparative analysis of parental landscape perceptions and geographic information systems-based urban planning indexes. Professional Geographer. 2023;75(4):604-17. Available from: https://doi.org/10.1080/00330124.2022.2124180.
- Picetti R, Juel R, Milner J, Bonell A, Karakas F, Dangour AD, et al. Effects on child and adolescent health of climate change mitigation policies: A systematic review of modelling studies. Environ Res. 2023;238:117102. Available from:

https://www.sciencedirect.com/science/article/pii/S0013935123019060.

- Rauk L, Rupp L, Hohl BC, Kondo MC, Ornelas L, Carter PM, Zimmerman MA. Lessons learned from local vacant land management organizations for engaging youth in greening. Am J Community Psychol. 2023;72:187-202. Available from: <u>https://doi.org/10.1002/ajcp.12688</u>.
- Shittu E, Lakhanpaul M, Vigurs C, Sarkar K, Koch M, Parikh P, Campos LC. A rapid systematic scoping review of research on the impacts of water contaminated by chemicals on very young children. Sci Total Environ. 2023;891. Available from: <u>https://doi.org/10.1016/j.scitotenv.2023.164604</u>.

INDIGENOUS PEOPLES

 Davies A, Gwynn J, Allman-Farinelli M, Flood V, Dickson M, Turner N, et al. Programs Addressing Food Security for First Nations Peoples: A Scoping Review. Nutrients. 2023;15(14):3127. Available from: <u>https://doi.org/10.3390/nu15143127</u>.



Centre de collaboration nationale en santé environnementale

- Huynh L, Anjum S, Lieu T, Horse ML, Martin-Hill D, Wekerle C. Examining the connection between water concerns, water anxiety, and resilience among Indigenous persons: A systematic scoping review. Child Abuse Negl. 2023. Available from: https://doi.org/10.1016/j.chiabu.2023.106184.
- Ramirez Prieto M, Sallans A, Ostertag S, Wesche S, Kenny TA, Skinner K. Food programs in Indigenous communities within northern Canada: A scoping review. Can Geogr. 2023:1. Available from: <u>https://doi.org/10.1111/cag.12872</u>.
- Stalwick JA, Ratelle M, Gurney KEB, Drysdale M, Lazarescu C, Comte J, et al. Sources of exposure to lead in Arctic and subarctic regions: a scoping review. Int J Circumpolar Health. 2023;82(1):2208810. Available from: <u>https://doi.org/10.1080/22423982.2023.2208810</u>.
- Tulve NS, Croghan CW, Plewe BL, Thompson Duffy H, Adams K, McBride T, et al. Pesticide, allergen, PCB, and lead measurements in childcare centers located on tribal lands in the Pacific Northwest, United States. J Expo Sci Environ Epidemiol. 2023. Available from: <u>https://doi.org/10.1038/s41370-023-00602-5</u>.

OLDER ADULTS

- Antal H, Bhutani S. Identifying linkages between climate change, urbanisation, and population ageing for understanding vulnerability and risk to older people: a review. Ageing International. 2023;48(3):816-39. Available from: <u>https://doi.org/10.1007/s12126-022-09504-7</u>.
- Australian Government Department of Health and Aged Care. Final report on the development of the draft National Aged Care Design Principles and Guidelines. Canberra ACT: Government of Australia; 2023. Available from: <u>https://www.health.gov.au/sites/default/files/2023-09/finalreport-on-the-development-of-the-draft-national-aged-care-design-principles-andguidelines.docx.</u>
- Azim FT, Ariza-Vega P, Gardiner PA, Ashe MC. Indoor built environment and older adults' activity: A systematic review. Can J Aging. 2023;42(2):241-58. Available from: <u>https://doi.org/10.1017/s0714980822000241</u>.
- Chua CMS, Chua JYX, Shorey S. Effectiveness of home-based interventions in improving loneliness and social connectedness among older adults: a systematic review and meta-analysis. Aging Ment Health. 2023:1-10. Available from: <u>https://doi.org/10.1080/13607863.2023.2237919</u>.
- Fancello G, Vallée J, Sueur C, van Lenthe FJ, Kestens Y, Montanari A, Chaix B. Micro urban spaces and mental well-being: Measuring the exposure to urban landscapes along daily mobility paths and their effects on momentary depressive symptomatology among older population. Environ Int. 2023;178:N.PAG-N.PAG. Available from: <u>https://doi.org/10.1016/j.envint.2023.108095</u>.
- Levasseur M, Dubois M-F, Généreux M, Naud D, Trottier L, Menec V, et al. Key Age-Friendly Components of Municipalities that Foster Social Participation of Aging Canadians: Results from the Canadian Longitudinal Study on Aging. J Urban Health. 2023:1-11. Available from: <u>https://doi.org/10.1007/s11524-023-00762-7</u>.



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

To provide feedback on this document, please visit www.ncceh.ca/en/document_feedback

This document can be cited as: National Collaborating Centre for Environmental Health. Environmental health research scan. Vancouver, BC: NCCEH. 2023 September.

Permission is granted to reproduce this document in whole, but not in part. Production of this document has been made possible through a financial contribution from the Public Health Agency of Canada through the National Collaborating Centre for Environmental Health.