

ENVIRONMENTAL HEALTH RESEARCH SCAN

WITH COVID-19 SECTIONS

VOL 7 (4) APRIL 2023



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Environmental Health (EH) Research Scan: Aims and Scope

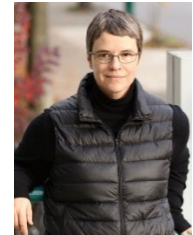
NCCEH's EH Research Scan aims to expand awareness of topics in environmental health, in line with [NCCEH's vision](#) to be the indispensable online resource for environmental health practitioners and policy-makers across Canada. This research scan is not peer reviewed; it does not cover all research, news, and information, and NCCEH is not responsible for the accuracy of the content from media or databases.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.

COVID-19 Publications are listed in the sections above and there are also **COVID-19 [Additional Topics](#)**.

EDITOR PICKS

Chronic diseases associated with mortality in British Columbia, Canada during the 2021 Western North America extreme heat event [journal article]

Sarah B Henderson, Scientific Director, Environmental Health Services, BCCDC; Scientific Director, NCCEH



“We found that people with schizophrenia were at much higher risk than others during the EHE. People with chronic kidney disease and ischemic heart disease were also at increased risk. This information will be used to help develop programs that support people at higher risk during future EHEs.”

Alternative disposition services: green burial, alkaline hydrolysis and human composting [guidance document]

Juliette O’Keeffe (right) - Knowledge Translation Scientists, NCCEH



“Public interest in new ways to dispose of human remains (alternative disposition services), is growing, driven in part by consumer demand for more sustainable funeral options. Alternatives include green burial (permitted in most Canadian provinces and territories), alkaline hydrolysis (only permitted in SK, ON, QU, NL, and NWT), and human composting, which is not currently permitted in any Canadian jurisdiction.”

Rapid implementation of bikeways for healthy, safe, equitable and more sustainable communities [webinar]

Matt Craig (right), Director, System Planning, TransLink; Brian Patterson, Senior Transportation Planner, Urban Systems



“This webinar will provide an overview of the Guide and how rapid implementation of cycling facilities can help create more healthy, equitable, and sustainable communities.”

The four pillars of housing influencing health equity [webinar]

Carolyn Swope (right), Diana Hernandez, Liv Yoon



“The presenters summarize the evidence about housing and health, and paths forward to leverage housing as a platform to promote health equity.”

An old issue on the front burner: health and environmental impacts of gas stoves [webinar]

Michael Brauer, Professor, Faculty of Medicine, School of Population and Public Health, University of British Columbia



“This presentation will disentangle these recent developments by providing overview of the state of evidence linking gas stove use with incident asthma, discuss the role of nitrogen dioxide air pollution and its health impacts and then summarize climate impacts related to gas appliance use in residential environments.”

March research scan with COVID-19 sections [blog]

National Collaborating Centre for Environmental Health

This monthly Research Scan highlights recent environmental health publications by topic and provides easy access to article abstracts and report summaries to support public health professionals, researchers, planners, students, and others working in public health.



NCCEH eNews (Mar 2023): A guide to post-flooding community-level psychosocial response and recovery practices in Canada; more...

National Collaborating Centre for Environmental Health

This monthly eNews highlights recent environmental health publications, research scans, webinars and other events and resources.



ENVIRONMENTAL HEALTH RESEARCH SCAN

SELECTED PUBLICATIONS

1. Brauer M. **An old issue on the front burner: health and environmental impacts of gas stoves [webinar]**. Vancouver, BC: National Collaborating Centre for Environmental Health; 2023 Apr 19. Available from: <https://ncceh.ca/content/ncceh-environmental-health-seminar-series>.
1. Craig M, Patterson B. **Rapid implementation of bikeways for healthy, safe, equitable and more sustainable communities [webinar]**. Vancouver, BC: National Collaborating Centre for Environmental Health; 2023 Mar 23. Available from: <https://app.cyberimpact.com/newsletter-view-online?ct=56BfouE6Kfy5BUKjcl7wxdT9Yk0pB2TsKARNN5GVOT9yrH0twtdedCdYJrJb7uwd7sY0Er oUKrVM4E8rQsCFXw~>.
2. Lee MJ, McLean KE, Kuo M, Richardson GRA, Henderson SB. **Chronic diseases associated with mortality in British Columbia, Canada during the 2021 Western North America extreme heat event**. *GeoHealth*. 2023;7(3):e2022GH000729. Available from: <https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2022GH000729>.
3. National Collaborating Centre for Environmental Health. **NCCEH eNews (Mar 2023): A guide to post-flooding community-level psychosocial response and recovery practices in Canada; more...** Vancouver, BC: NCCEH; 2023 Mar 16. Available from: <https://app.cyberimpact.com/newsletter-view-online?ct=EmUZvwd4Dv7UTZ5YX NiSEHTXl10rdee ZYs9 w lhG M83WOTY5DvuVbCFiAqUjgK15 uQvmtiM2ioC6Sfo0ug~>.

4. National Collaborating Centre for Environmental Health. **Mar research scan with COVID-19 sections [blog]**. Vancouver, BC: NCCEH; 2023 Apr 18. Available from: <https://ncceh.ca/content/blog/march-2023-research-scan-covid-19-sections>.
5. O’Keeffe J. **Alternative disposition services: Green burial, alkaline hydrolysis and human composting [guidance document]**. Vancouver, BC: National Collaborating Centre for Environmental Health; 2023 Apr 19. Available from: <https://ncceh.ca/documents/alternative-disposition-services-green-burial-alkaline-hydrolysis-and-human-composting>.
6. Swope C, Hernández D, Yoon L. **The four pillars of housing influencing health equity [webinar]**. Vancouver, BC: National Collaborating Centre for Environmental Health; 2023 Mar 30. Available from: <https://ncceh.ca/content/blog/four-pillars-housing-influencing-health-equity>.

INDIGENOUS ENVIRONMENTAL HEALTH

1. Daigle L, Ravel A, Rondenay Y, Simon A, Mokoush KN, Aenishaenslin C. **Knowledge, attitudes, and practices regarding dogs and dog bites in Indigenous northern communities: a mixed methods study**. *Frontiers in Veterinary Science*. 2023;10. Available from: <https://www.frontiersin.org/articles/10.3389/fvets.2023.1080152>.
2. Funnell S, Jull J, Mbuagbaw L, Welch V, Dewidar O, Wang X, et al. **Improving social justice in observational studies: protocol for the development of a global and Indigenous STROBE-equity reporting guideline**. *Int J Equity Health*. 2023;22(1):55. Available from: <https://doi.org/10.1186/s12939-023-01854-1>.
3. 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*. 2023:106184. Available from: <https://www.sciencedirect.com/science/article/pii/S0145213423001655>.

AGRICULTURAL OPERATIONS

1. Gautam K, Sharma P, Dwivedi S, Singh A, Gaur VK, Varjani S, et al. **A review on control and abatement of soil pollution by heavy metals: Emphasis on artificial intelligence in recovery of contaminated soil**. *Environ Res*. 2023;225:115592. Available from: <https://doi.org/10.1016/j.envres.2023.115592>.
2. Paphitis K, Metcalf D, Weese JS. **Backyard chickens - A cross-sectional survey of current and prospective backyard chicken owners in Ontario (2019-2021)**. *Can Vet J*. 2023;64(1):54-62. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc9754136/>.
3. Sheehan MC. **Urban agrobiodiversity, health and city climate adaptation plans**. Geneva, Switzerland: World Health Organization; 2023 Feb 1. Available from: <https://doi.org/10.2471/blt.22.288857>.
4. Zeunert J, Court T. **Chapter 16 - Translating unique agricultural precedents into public urban agriculture design**. In: Droege P, editor. *Urban and Regional Agriculture*: Academic Press; 2023. p. 431-56. Available from: <https://www.sciencedirect.com/science/article/pii/B9780128202869000029>.

- Zutter C, Stoltz A. **Community gardens and urban agriculture: Healthy environment/healthy citizens.** *Int J Ment Health Nurs.* 2023. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/inm.13149>.

BIOLOGICAL AGENTS

BUILT ENVIRONMENT

- Filigrana P, Levy JI, Gauthier J, Batterman S, Adar SD. **Health benefits from cleaner vehicles and increased active transportation in Seattle, Washington.** *J Expo Sci Environ Epidemiol.* 2022;32(4):538-44. Available from: <https://doi.org/10.1038/s41370-022-00423-y>.
- Grigoletto A, Toselli S, Zijlema W, Marquez S, Triguero-Mas M, Gidlow C, et al. **Restoration in mental health after visiting urban green spaces, who is most affected? Comparison between good/poor mental health in four European cities.** *Environ Res.* 2023;223:115397. Available from: <https://www.sciencedirect.com/science/article/pii/S0013935123001895>.
- Müller H, Rehn-Groenendijk J, Wasmer A. **Small-scale urban design interventions: A framework for deploying cities as resource for mental health and mental health literacy.** *Frontiers in Psychology.* 2023;14. Available from: <https://www.frontiersin.org/articles/10.3389/fpsyg.2023.1112209>.
- Perrotta K. **Providing Equitable Transportation to Rural Nova Scotia.** Toronto, ON: Canadian Public Health Association; 2023 Mar. Available from: <https://www.cpha.ca/providing-equitable-transportation-rural-nova-scotia>.
- Translink. **Rapid Implementation Design Guide for Bikeways in Metro Vancouver. Transport 2050 implementation.** Vancouver, BC: Translink; 2022 Nov. Available from: https://www.translink.ca/-/media/translink/documents/cycling/regional-cycling-strategy/rapid_implementation_design_guide_for_bikeways_in_metro_vancouver.pdf.
- Vidal Yañez D, Pereira Barboza E, Cirach M, Daher C, Nieuwenhuijsen M, Mueller N. **An urban green space intervention with benefits for mental health: A health impact assessment of the Barcelona “Eixos Verds” Plan.** *Environ Int.* 2023:107880. Available from: <https://www.sciencedirect.com/science/article/pii/S0160412023001538>.
- Westenhöfer J, Nouri E, Reschke ML, Seebach F, Buchcik J. **Walkability and urban built environments—a systematic review of health impact assessments (HIA).** *BMC Public Health.* 2023;23(1):518. Available from: <https://doi.org/10.1186/s12889-023-15394-4>.

CHEMICAL AGENTS – METALS, GENERAL

- Center for International Environmental Law. **Breathing Plastic: The Health Impacts of Invisible Plastics in the Air.** Geneva, Switzerland: Center for International Environmental Law; 2023 Mar 17. Available from: <https://www.ciel.org/breathing-plastic-the-health-impacts-of-invisible-plastics-in-the-air/>.
- Dewika M, Markandan K, Irfan NA, Mohd Abdah MAA, Ruwaida JN, Sara YY, et al. **Review of microplastics in the indoor environment: Distribution, human exposure and potential health**

- impacts.** Chemosphere. 2023;324:N.PAG-N.PAG. Available from: <https://doi.org/10.1016/j.chemosphere.2023.138270>.
3. Grandjean P, Meddis A, Nielsen F, Sjödin A, Hjorth MF, Astrup A, et al. **Weight loss relapse associated with exposure to perfluoroalkylate substances.** Obesity. 2023. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1002/oby.23755>.
 4. Kutarna S, Du X, Diamond ML, Blum A, Peng H. **Widespread presence of chlorinated paraffins in consumer products.** Environmental Science: Processes & Impacts. 2023. Available from: <http://dx.doi.org/10.1039/D2EM00494A>.
 5. Landrigan PJ, Raps H, Cropper M, Bald C, Brunner M, Canonizado EM, et al. **The Minderoo-Monaco Commission on Plastics and Human Health.** Annals of Global Health. 2023;89(1):23. Available from: <http://doi.org/10.5334/aogh.4056>.
 6. Schwartz-Narbonne H, Xia C, Shalin A, Whitehead HD, Yang D, Peaslee GF, et al. **Per- and Polyfluoroalkyl Substances in Canadian Fast Food Packaging.** Environ Sci Technol Lett. 2023. Available from: <https://doi.org/10.1021/acs.estlett.2c00926>.
 7. Szmytke E, Brzezińska D, Machnowski W, Kokot S. **Firefighters' Clothing Contamination in Fires of Electric Vehicle Batteries and Photovoltaic Modules: Literature Review and Pilot Tests Results.** Int J Environ Res Public Health. 2022;19(19):12442. Available from: <https://www.mdpi.com/1660-4601/19/19/12442>.

CHEMICAL AGENTS – PESTICIDES

1. Kujawski E, Nowakowski A. **Weed Management: Alternatives to the Use of Glyphosate.** European Parliament: The Greens/European Free Alliance; 2023 Sep 03. Available from: <https://policycommons.net/artifacts/3529386/weed-management/>.

CHEMICAL AGENTS – SHALE GAS

CHILDREN'S ENVIRONMENTAL HEALTH

1. Castro A, Kappeler R, Kienzler S, Joss MK, Laeremans M, Plass D, et al. **ETC HE Report 2022/22: Environmental health risks to children and adolescents: an umbrella review on indoor and outdoor air pollution.** European Environment Agency, European Topic Centre, Human Health and the Environment; 2023 Feb. Available from: <https://www.eionet.europa.eu/etcs/etc-he/products/etc-he-products/etc-he-reports/etc-he-report-2022-22-environmental-health-risks-to-children-and-adolescents-an-umbrella-review-on-indoor-and-outdoor-air-pollution>.
2. Castro AF, R. K, S. K, Kutlar Joss M, Laeremans M, Plass D, et al. **Environmental health risks to children and adolescents: an umbrella review on indoor and outdoor air pollution.** European Topic Centre on Human Health and the Environment; 2023 Feb. Available from: <https://www.eionet.europa.eu/etcs/etc-he/products/etc-he-products/etc-he-reports/etc-he-report-2022-22-environmental-health-risks-to-children-and-adolescents-an-umbrella-review-on->

[indoor-and-outdoor-air-pollution/@download/file/ETC%20HE_2022-22_3.2.6.2_Deliverable2_v.2.2_Final_27-03-2023.pdf](#).

3. Díaz-Martínez F, Sánchez-Sauco MF, Cabrera-Rivera LT, Sánchez CO, Hidalgo-Albadalejo MD, Claudio L, et al. **Systematic Review: Neurodevelopmental Benefits of Active/Passive School Exposure to Green and/or Blue Spaces in Children and Adolescents.** *Int J Environ Res Public Health.* 2023;20(5):3958. Available from: <https://www.mdpi.com/1660-4601/20/5/3958>.
4. Hsu H-HL, Wilson A, Schwartz J, Kloog I, Wright RO, Coull BA, et al. **Prenatal Ambient Air Pollutant Mixture Exposure and Early School-age Lung Function.** *Environmental Epidemiology.* 2023;7(2):e249. Available from: https://journals.lww.com/environepidem/Fulltext/2023/04000/Prenatal_Ambient_Air_Pollutant_Mixture_Exposure.7.aspx.
5. Prados MJ, Nicosia N, Datar A. **Impact of built, social, and economic environments on adolescent obesity and related health behaviors.** *Obesity.* 2023;31(4):1085-94. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1002/oby.23682>.
6. Saenen ND, Nawrot TS, Hautekiet P, Wang C, Roels HA, Dadvand P, et al. **Residential green space improves cognitive performances in primary schoolchildren independent of traffic-related air pollution exposure.** *Environ Health.* 2023;22(1):33. Available from: <https://doi.org/10.1186/s12940-023-00982-z>.

CLIMATE CHANGE

1. **Transboundary and emerging diseases and climate change. What is needed to advance our knowledge?** *Transboundary & Emerging Diseases.* 2022;69(6):3145-6. Available from: <https://doi.org/10.1111/tbed.14726>.
2. British Columbia Centre for Disease Control. **Climate change and health.** Vancouver, BC: BCCDC; 2023. Available from: <http://www.bccdc.ca/health-info/prevention-public-health/climate-change-health>.
3. Climate Action Network Canada. **Spending What It Takes: Transformational climate investments for long-term prosperity in Canada.** Climate Action Network Canada; 2023 Feb 07. Available from: <https://policycommons.net/artifacts/3447262/spending-what-it-takes/>.
4. Ecojustice, Environmental Defence, Breast Cancer Action Quebec, David Suzuki Foundation, Canadian Association of Physicians for the Environment. **Letter to the Standing Committee on Environment and Sustainable Development. Re: Bill S-5, Strengthening Environmental Protection for a Healthier Canada Act.** Ottawa, ON: Ourcommons; 2022 Nov 14. Available from: <https://www.ourcommons.ca/Content/Committee/441/ENVI/Brief/BR12090991/br-external/Jointly1-e.pdf>.
5. Edelson PJ, Harold R, Ackelsberg J, Duchin JS, Lawrence SJ, Manabe YC, et al. **Climate Change and the Epidemiology of Infectious Diseases in the United States.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America.* 2023;76(5):950-6. Available from: <https://doi.org/10.1093/cid/ciac697>.

6. Intergovernmental Panel on Climate Change. **AR6 Synthesis report: Climate change 2023**. New York, NY: IPCC, United Nations; 2023 Mar. Available from: <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>.
7. Kam S, Hwang BJ, Parker ER. **The impact of climate change on atopic dermatitis and mental health comorbidities: a review of the literature and examination of intersectionality**. *Int J Dermatol*. 2023;62(4):449-58. Available from: <https://doi.org/10.1111/ijd.16557>.
8. Ray Biswas R, Rahman A. **Adaptation to climate change: A study on regional climate change adaptation policy and practice framework**. *J Environ Manage*. 2023;336:117666. Available from: <https://doi.org/10.1016/j.jenvman.2023.117666>.
9. Roberts M, Colley K, Currie M, Eastwood A, Li K-H, Avery LM, et al. **The Contribution of Environmental Science to Mental Health Research: A Scoping Review**. *Int J Environ Res Public Health*. 2023;20(7):5278. Available from: <https://www.mdpi.com/1660-4601/20/7/5278>.
10. Schmitz OJ, Sylvén M, Atwood TB, Bakker ES, Berzaghi F, Brodie JF, et al. **Trophic rewilding can expand natural climate solutions**. *Nature Climate Change*. 2023. Available from: <https://doi.org/10.1038/s41558-023-01631-6>.
11. Wise J. **Climate change: Window to act is closing rapidly, warn scientists**. *BMJ*. 2023;380:p674. Available from: <https://www.bmj.com/content/bmj/380/bmj.p674.full.pdf>.

COMMUNICABLE AND INFECTIOUS DISEASES

See **Covid 19 subsections** in this issue and in the [COVID-19 Additional Topics and Guidance](#) section at the end of this issue (e.g., Occupational Guidance, Transit, Transmission)

DRINKING WATER

1. Health Canada. **Consultation: Draft objective for per- and polyfluoroalkyl substances in Canadian drinking water**. Ottawa, ON: Government of Canada; 2023 Feb 15. Available from: <https://www.canada.ca/en/health-canada/programs/consultation-draft-objective-per-polyfluoroalkyl-substances-canadian-drinking-water.html>.
2. Hinnenkamp R, Sorenson S, Evanson E, Yoder J, Mattioli M. **Campylobacteriosis Outbreak Associated with Consumption of Raw Water — Montana, 2022**. *MMWR*. 2023;72(15). Available from: https://www.cdc.gov/mmwr/volumes/72/wr/mm7215a6.htm?s_cid=mm7215a6_e&ACSTrackingID=USCDC_921-DM103022&ACSTrackingLabel=This%20Week%20in%20MMWR%3A%20Vol.%2072%2C%20April%2014%2C%202023&deliveryName=USCDC_921-DM103022.
3. Jeanvoine A, Richard M, Meunier A, Chassagne S, Cholley P, Gbaguidi-Haore H, et al. **Persistent contamination of a hospital hot water network by Legionella pneumophila**. *Int J Hyg Environ Health*. 2023;250:114143. Available from: <https://www.sciencedirect.com/science/article/pii/S1438463923000342>.
4. Liew Z, Meng Q, Yan Q, Schullehner J, Hansen B, Kristiansen SM, et al. **Association Between Estimated Geocoded Residential Maternal Exposure to Lithium in Drinking Water and Risk for**

- Autism Spectrum Disorder in Offspring in Denmark.** JAMA Pediatrics. 2023. Available from: <https://doi.org/10.1001/jamapediatrics.2023.0346>.
5. Sherchan S, Thakali O, Ikner LA, Gerba CP. **Survival of SARS-CoV-2 in wastewater.** Sci Total Environ. 2023;163049. Available from: <https://www.sciencedirect.com/science/article/pii/S0048969723016674>.
 6. US Environmental Protection Agency. **EPA Cybersecurity for the Water Sector.** Washington, DC: US EPA; 2023 Mar 30. Available from: <https://www.epa.gov/waterriskassessment/epa-cybersecurity-water-sector>.

EMERGENCY PREPAREDNESS

1. Environmental Law Society Centre. **Reducing Wildfire by Encouraging Prescribed and Cultural Burning.** Victoria, BC: University of Victoria; 2023 Mar 15. Available from: <https://elc.uvic.ca/publications/reducing-wildfire-by-encouraging-prescribed-and-cultural-burning/>.
2. Futterman ID, Grace H, Weingarten S, Borjian A, Clare CA. **Maternal anxiety, depression and posttraumatic stress disorder (PTSD) after natural disasters: a systematic review.** The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians. 2023;36(1):2199345. Available from: <https://doi.org/10.1080/14767058.2023.2199345>.
3. Lotzin A, Franc de Pommereau A, Laskowsky I. **Promoting Recovery from Disasters, Pandemics, and Trauma: A Systematic Review of Brief Psychological Interventions to Reduce Distress in Adults, Children, and Adolescents.** Int J Environ Res Public Health. 2023;20(7):5339. Available from: <https://www.mdpi.com/1660-4601/20/7/5339>.
4. World Health Organization. **WHO thematic platform for health emergency and disaster risk management research network: report of the fourth core group meeting “Promote global collaboration for effective knowledge sharing”, online meeting, 27 October 2022.** Geneva, Switzerland: World Health Organization; 2023. Available from: <https://apps.who.int/iris/handle/10665/366404>.

ENVIRONMENTAL HEALTH SURVEILLANCE

1. Han Z, Xia T, Xi Y, Li Y. **Healthy Cities, A comprehensive dataset for environmental determinants of health in England cities.** Scientific Data. 2023;10(1):165. Available from: <https://doi.org/10.1038/s41597-023-02060-y>.
2. Naing C, Tung WS, Htet NH, Aung HH, Whittaker MA. **Community engagement in health services research on soil-transmitted helminthiasis in Asia Pacific region: Systematic review.** PLOS Glob Public Health. 2023;3(3):e0001694. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36963099>.

ENVIRONMENTAL PLANNING

FOOD

Safety

1. Abaajeh AR, Kingston CE, Harty M. **Environmental factors influencing the growth and pathogenicity of microgreens bound for the market: a review.** *Renewable Agriculture and Food Systems.* 2023;38:e12. Available from: <https://www.cambridge.org/core/article/environmental-factors-influencing-the-growth-and-pathogenicity-of-microgreens-bound-for-the-market-a-review/4EDD50CE0F9DC7A2E4F9BE241A5C2917>.
2. Bhardwaj K, Meneely JP, Haughey SA, Dean M, Wall P, Zhang G, et al. **Risk assessments for the dietary intake aflatoxins in food: A systematic review (2016–2022).** *Food Control.* 2023;149:N.PAG-N.PAG. Available from: <https://doi.org/10.1016/j.foodcont.2023.109687>.
3. Caggiano G, Marcotrigiano V, D’Ambrosio M, Marzocca P, Spagnuolo V, Fasano F, et al. **Preliminary Investigation on Hygienic-Sanitary Quality of Food Vending Machines.** *Int J Environ Res Public Health.* 2023;20(8):5557. Available from: <https://www.mdpi.com/1660-4601/20/8/5557>.
4. Canada Commons. **Foodborne illness outbreaks: Roles and responsibilities.** Canada Commons; 2023. Available from: https://canadacommons.ca/search/?q=ncceh&sort=date_desc.
5. Chhaya RS, O’Brien J, Cummins E. **Feed to fork risk assessment of mycotoxins under climate change influences - recent developments.** *Trends in Food Science & Technology.* 2022;126:126-41. Available from: <https://www.sciencedirect.com/science/article/pii/S0924224421004842>.
6. EFSA Panel on Food Contact Materials E, Aids P, Lambré C, Barat Baviera JM, Bolognesi C, Chesson A, et al. **Re-evaluation of the risks to public health related to the presence of bisphenol A (BPA) in foodstuffs.** *EFSA Journal.* 2023;21(4):e06857. Available from: <https://efsa.onlinelibrary.wiley.com/doi/abs/10.2903/j.efsa.2023.6857>.
7. Hashemi M, Salayani M, Afshari A, Samadi Kafil H, Noori MAS. **The Global Burden of Viral Food-borne Diseases: A Systematic Review.** *Curr Pharm Biotechnol.* 2023;24:1-16. Available from: <https://doi.org/10.2174/1389201024666230221110313>.
8. Marden E, Kulkarni D, McMahon EM, Rowand MS, Verzijden K. **Chapter 11 - Regulatory frameworks applicable to food products of genome editing and synthetic biology in the United States, Canada, and the European Union.** In: Lopez-Correa C, Suarez-Gonzalez A, editors. *Genomics and the Global Bioeconomy:* Academic Press; 2023. p. 255-85. Available from: <https://www.sciencedirect.com/science/article/pii/B9780323916011000018>.
9. Martin W, Pham A, Wagner L, Werner A. **Social value of a Canadian urban food bank garden.** *Journal of Agriculture, Food Systems, and Community Development.* 2022;11(4):197–222. Available from: <https://www.foodsystemsjournal.org/index.php/fsj/article/view/1101>.
10. Misiou O, Koutsoumanis K. **Climate change and its implications for food safety and spoilage.** *Trends in Food Science & Technology.* 2022;126:142-52. Available from: <https://www.sciencedirect.com/science/article/pii/S0924224421002235>.

11. Osaili TM, Hasan F, Al-Nabulsi AA, Olaimat AN, Ayyash M, Obaid RS, et al. **A worldwide review of illness outbreaks involving mixed salads/dressings and factors influencing product safety and shelf life.** Food microbiology. 2023;112:104238. Available from: <https://doi.org/10.1016/j.fm.2023.104238>.
12. Sadighara P, Abedini AH, Mahvi AH, Esrafil A, Mohammadi AA, Tarahomi A, et al. **Benzo (a) pyrene in infant foods: a systematic review, meta-analysis, and health risk assessment.** Rev Environ Health. 2023. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/37053495>.
13. Singh R, Dutt S, Sharma P, Sundramoorthy AK, Dubey A, Singh A, et al. **Future of Nanotechnology in Food Industry: Challenges in Processing, Packaging, and Food Safety.** Glob Chall. 2023;7(4):2200209. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/37020624>.
14. Strobbe S, Wesana J, Van Der Straeten D, De Steur H. **Public acceptance and stakeholder views of gene edited foods: a global overview.** Trends in Biotechnology. 2023. Available from: <https://www.sciencedirect.com/science/article/pii/S0167779922003390>.
15. Xu Z, Tian L, Liu L, Goodyer CG, Hales BF, Bayen S. **Food Thermal Labels are a Source of Dietary Exposure to Bisphenol S and Other Color Developers.** Environ Sci Tech. 2023;57(12):4984-91. Available from: <https://doi.org/10.1021/acs.est.2c09390>.

GENERAL

1. Biswas SS. **Role of Chat GPT in Public Health.** Ann Biomed Eng. 2023. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36920578>.
2. Friel S, Collin J, Daube M, Depoux A, Freudenberg N, Gilmore AB, et al. **Commercial determinants of health: future directions.** Lancet (London, England). 2023;401(10383):1229-40. Available from: [https://doi.org/10.1016/S0140-6736\(23\)00011-9](https://doi.org/10.1016/S0140-6736(23)00011-9).
3. Nguyen PY, Astell-Burt T, Rahimi-Ardabili H, Feng X. **Effect of nature prescriptions on cardiometabolic and mental health, and physical activity: a systematic review.** Lancet Planet Health. 2023;7(4):e313-e28. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/37019572>.
4. Vivarelli C, Censi F, Calcagnini G, De Ruvo E, Calò L, Mattei E. **5G Service and Pacemakers/Implantable Defibrillators: What Is the Actual Risk?** Int J Environ Res Public Health. 2023;20(5):4512. Available from: <https://www.mdpi.com/1660-4601/20/5/4512>.
5. Zheng Y, Ma Y, Easa SM, Hao W, Feng Z. **Nomophobia, attitude and mobile phone use while riding an E-bike: Testing a dual-process model of self-control.** Accid Anal Prev. 2023;185:107032. Available from: <https://doi.org/10.1016/j.aap.2023.107032>.

Health Policy

1. Chamberlain RC, Fecht D, Davies B, Laverty AA. **Effects of low emission zones and congestion charging zones on physical health outcomes: a systematic review.** Lancet. 2022;400 Suppl 1:S30. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36929974>.
2. European Observatory on Health Systems Policies, Scott LG, Falkenbach M, Siciliani L, McKee M, Wismar M, et al. **Making Health for All Policies: harnessing the co-benefits of health.** Geneva,

Switzerland: World Health Organization; 2023. Available from:

<https://eurohealthobservatory.who.int/publications/i/making-health-for-all-policies-harnessing-the-co-benefits-of-health#:~:text=Health%20co%2Dbenefits%20can%20be,equal%2C%20and%20more%20productive%20population.>

3. Wilson L, Hamwi S, Zanni F, Lomazzi M. **Global public health policies: gathering public health associations' perspectives.** *Global health action.* 2023;16(1):2183596. Available from: <https://doi.org/10.1080/16549716.2023.2183596>.
4. Zhong T, Rahman L. **To use or not to use calorie and health warning labels to curb alcohol consumption.** *Can J Public Health.* 2023. Available from: <https://doi.org/10.17269/s41997-023-00765-6>.

HEALTH EQUITY

1. Rojas-Garcia A, Holman D, Tinner L, Ejegi-Memeh S, Ben-Shlomo Y, Lavery AA. **Use of intersectionality theories in interventional health research in high-income countries: a systematic scoping review.** *Lancet.* 2022;400 Suppl 1:S58. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36930004>.
2. Shareck M, Aubé E, Sersli S. **Neighborhood Physical and Social Environments and Social Inequalities in Health in Older Adolescents and Young Adults: A Scoping Review.** *Int J Environ Res Public Health.* 2023;20(8):5474. Available from: <https://www.mdpi.com/1660-4601/20/8/5474>.
3. Tanner LM, Wildman JM, Stoniute A, Still M, Bernard K, Green R, et al. **Non-pharmaceutical primary care interventions to improve mental health in deprived populations: a systematic review.** *Br J Gen Pract.* 2023;73(729):e242-e8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36997215>.

HEALTH IMPACT ASSESSMENT

INDOOR AIR

1. Brauer M. **An old issue on the front burner: health and environmental impacts of gas stoves [webinar].** Vancouver, BC: National Collaborating Centre for Environmental Health; 2023 Apr 19. Available from: <https://ncceh.ca/content/ncceh-environmental-health-seminar-series>.
2. Correia C, Martins V, Matroca B, Santana P, Mariano P, Almeida A, et al. **A Low-Cost Sensor System Installed in Buses to Monitor Air Quality in Cities.** *Int J Environ Res Public Health.* 2023;20(5):4073. Available from: <https://www.mdpi.com/1660-4601/20/5/4073>.
3. Fuller G, Friedman S, Mudway I. **Impacts of air pollution across the life course – evidence highlight note.** London, UK: Imperial College London, Environmental Research Group; 2023 Apr. Available from: <https://www.london.gov.uk/sites/default/files/2023-04/Imperial%20College%20London%20Projects%20-%20impacts%20of%20air%20pollution%20across%20the%20life%20course%20%E2%80%93%20evidence%20highlight%20note.pdf>.

4. Kumar P, Singh AB, Arora T, Singh S, Singh R. **Critical review on emerging health effects associated with the indoor air quality and its sustainable management.** *Sci Total Environ.* 2023;872:162163. Available from: <https://doi.org/10.1016/j.scitotenv.2023.162163>.
5. Mark-Carew M, Kang G, Pampati S, Mead KR, Martin Jr SB, Barrios LC. **Ventilation Improvements Among K–12 Public School Districts — United States, August–December 2022.** *MMWR.* 2023. Available from: https://www.cdc.gov/mmwr/volumes/72/wr/mm7214a4.htm?s_cid=mm7214a4_e&ACSTrackingID=USCDC_921-DM102781&ACSTrackingLabel=This%20Week%20in%20MMWR%3A%20Vol.%2072%2C%20April%207%2C%202023&deliveryName=USCDC_921-DM102781.
6. Viljoen M, Claassen N. **Pathophysiological aspects of exposure to dampness-associated indoor mould and mycotoxins: A mini-overview.** *Journal of Hazardous Materials Advances.* 2023;9:100228. Available from: <https://www.sciencedirect.com/science/article/pii/S277241662200184X>.

NUISANCE CONTROL

OUTDOOR AIR

1. American Lung A. **State of the Air 2023.** Chicago, IL: American Lung Association; 2023 Apr 18. Available from: <https://www.lung.org/research/sota>.
2. Boogaard H, Andersen ZJ, Brunekreef B, Forastiere F, Forsberg B, Hoek G, et al. **Clean air in Europe for all: A call for more ambitious action.** *Environmental Epidemiology.* 2023;7(2):e245. Available from: [https://journals.lww.com/environepidem/Fulltext/2023/04000/Clean air in Europe for all A call for more.3.aspx](https://journals.lww.com/environepidem/Fulltext/2023/04000/Clean%20air%20in%20Europe%20for%20all%20A%20call%20for%20more.3.aspx).
3. Health Canada. **Health Impacts of Air Pollution in Canada: Estimates of morbidity and premature mortality outcomes – 2021 Report.** Ottawa, ON: Health Canada; 2023 Apr 4. Available from: <https://www.canada.ca/en/health-canada/services/publications/healthy-living/health-impacts-air-pollution-2021.html>.
4. Jacquemin B, Burte E, Savouré M, Heinrich J. **Chapter 7 - Outdoor air pollution and asthma in a changing climate.** In: Nadif R, editor. *Asthma in the 21st Century*: Academic Press; 2023. p. 151-72. Available from: <https://www.sciencedirect.com/science/article/pii/B9780323854191000116>.
5. Johnson OE, Patel H, Miskelly GM, Rindelaub JD. **Drug substances in the air of a New Zealand city.** *Atmospheric Pollution Research.* 2023;14(5):101750. Available from: <https://www.sciencedirect.com/science/article/pii/S1309104223001046>.
6. Oguz S. **Mapped: Air Pollution Levels Around the World in 2022.** *Urbanization*; 2023; Available from: <https://elements.visualcapitalist.com/mapped-air-pollution-levels-around-the-world-2022/>.

7. Orellano P, Reynoso J, Quaranta N. **Effects of air pollution on restricted activity days: systematic review and meta-analysis.** *Environ Health.* 2023;22(1):31. Available from: <https://doi.org/10.1186/s12940-023-00979-8>.
8. Palinkas LA, De Leon J, Yu K, Salinas E, Fernandez C, Johnston J, et al. **Adaptation Resources and Responses to Wildfire Smoke and Other Forms of Air Pollution in Low-Income Urban Settings: A Mixed-Methods Study.** *Int J Environ Res Public Health.* 2023;20(7):5393. Available from: <https://www.mdpi.com/1660-4601/20/7/5393>.
9. Vergadi E, Rouva G, Angeli M, Galanakis E. **Infectious Diseases Associated with Desert Dust Outbreaks: A Systematic Review.** *Int J Environ Res Public Health.* 2022;19(11). Available from: <https://doi.org/10.3390/ijerph19116907>.

PERSONAL SERVICE ESTABLISHMENTS

1. Foerster M, Dufour L, Bäuml W, Schreiber I, Goldberg M, Zins M, et al. **Development and Validation of the Epidemiological Tattoo Assessment Tool to Assess Ink Exposure and Related Factors in Tattooed Populations for Medical Research: Cross-sectional Validation Study.** *JMIR Form Res.* 2023;7:e42158. Available from: <https://doi.org/10.2196%2F421582561-326x>.

PEST CONTROL

PHYSICAL AGENTS

1. Cantuaria ML, Brandt J, Blanes-Vidal V. **Exposure to multiple environmental stressors, emotional and physical well-being, and self-rated health: An analysis of relationships using latent variable structural equation modelling.** *Environ Res.* 2023;227:115770. Available from: <https://www.sciencedirect.com/science/article/pii/S0013935123005625>.
2. Cao T, Zheng Y, Dong H. **Control of odor emissions from livestock farms: A review.** *Environ Res.* 2023;225:115545. Available from: <https://doi.org/10.1016/j.envres.2023.115545>.
3. Chen X, Liu M, Zuo L, Wu X, Chen M, Li X, et al. **Environmental noise exposure and health outcomes: an umbrella review of systematic reviews and meta-analysis.** *Eur J Public Health.* 2023. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/37030015>.
4. Lan Z, Yuan M, Shao S, Li F. **Noise Emission Models of Electric Vehicles Considering Speed, Acceleration, and Motion State.** *Int J Environ Res Public Health.* 2023;20(4). Available from: <https://doi.org/10.3390%2Fijerph20043531>.
5. Marshall NS, Cho G, Toelle BG, Tonin R, Bartlett DJ, D'Rozario AL, et al. **The Health Effects of 72 Hours of Simulated Wind Turbine Infrasound: A Double-Blind Randomized Crossover Study in Noise-Sensitive, Healthy Adults.** *Environ Health Perspect.* 2023;131(3):037012. Available from: <https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP10757>.
6. Wolkoff M, Fyie L, Meuti M. **Light Pollution Disrupts Seasonal Differences in the Daily Activity and Metabolic Profiles of the Northern House Mosquito, *Culex pipiens*.** *Insects.* 2023;14(1):64. Available from: <https://www.mdpi.com/2075-4450/14/1/64>.

- Zhang X, Zhou S. **Building a City with Low Noise Pollution: Exploring the Mental Health Effect Thresholds of Spatiotemporal Environmental Noise Exposure and Urban Planning Solution.** Int J Environ Res Public Health. 2023;20(5):4222. Available from: <https://www.mdpi.com/1660-4601/20/5/4222>.

RADIATION

- Cholowsky NL, Chen MJ, Selouani G, Pett SC, Pearson DD, Danforth JM, et al. **Consequences of changing Canadian activity patterns since the COVID-19 pandemic include increased residential radon gas exposure for younger people.** Sci Rep. 2023;13(1):5735. Available from: <https://www.nature.com/articles/s41598-023-32416-8>.
- Davis D, Birnbaum L, Ben-Ishai P, Taylor H, Sears M, Butler T, et al. **Wireless technologies, non-ionizing electromagnetic fields and children: Identifying and reducing health risks.** Curr Probl Pediatr Adolesc Health Care. 2023;53(2):101374. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36935315>.
- Gosselin S, Thaivalappil A, Papadopoulos A, Mc WJ. **Public Health Messaging to Address Indoor Tanning: A Scoping Review.** J Health Commun. 2023:1-13. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36992625>.
- Redmayne M, Maisch DR. **ICNIRP Guidelines’s Exposure Assessment Method for 5G Millimetre Wave Radiation May Trigger Adverse Effects.** Int J Environ Res Public Health. 2023;20(7):5267. Available from: <https://www.mdpi.com/1660-4601/20/7/5267>.

RECREATIONAL AND SURFACE WATER

- Shahmohamadloo RS, Bhavsar SP, Ortiz Almirall X, Marklevitz SAC, Rudman SM, Sibley PK. **Cyanotoxins accumulate in Lake St. Clair fish yet their fillets are safe to eat.** Sci Total Environ. 2023;874:162381. Available from: <https://doi.org/10.1016/j.scitotenv.2023.162381>.
- Warren-Vega WM, Campos-Rodríguez A, Zárate-Guzmán AI, Romero-Cano LA. **A Current Review of Water Pollutants in American Continent: Trends and Perspectives in Detection, Health Risks, and Treatment Technologies.** Int J Environ Res Public Health. 2023;20(5):4499. Available from: <https://www.mdpi.com/1660-4601/20/5/4499>.
- Zhang Y, Whalen JK, Cai C, Shan K, Zhou H. **Harmful cyanobacteria-diatom/dinoflagellate blooms and their cyanotoxins in freshwaters: A nonnegligible chronic health and ecological hazard.** Water Res. 2023;233. Available from: <https://www.sciencedirect.com/science/article/pii/S0043135423002427>.

RISK ASSESSMENT, COMMUNICATION

SENIORS' ENVIRONMENTAL HEALTH

1. Hong A, Welch-Stockton J, Kim JY, Canham SL, Greer V, Sorweid M. **Age-Friendly Community Interventions for Health and Social Outcomes: A Scoping Review**. *Int J Environ Res Public Health*. 2023;20(3):2554. Available from: <https://www.mdpi.com/1660-4601/20/3/2554>.
2. Orr N, Abbott R, Bethel A, Paviour S, Whear R, Garside R, et al. **What are the effects of animals on the health and wellbeing of residents in care homes? A systematic review of the qualitative and quantitative evidence**. *BMC Geriatr*. 2023;23(1):170. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36964508>.

TOBACCO, CANNABIS, E-CIGARETTES

1. Banks E, Yazidjoglou A, Brown S, Nguyen M, Martin M, Beckwith K, et al. **Electronic cigarettes and health outcomes: umbrella and systematic review of the global evidence**. *Med J Aust*. 2023;218(6):267-75. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36939271>.
2. Canadian Centre on Substance Use Addiction. **Cannabis Legalization: Home Cultivation Findings**. Ottawa, ON: Canadian Centre on Substance Abuse; 2023 Feb 21. Available from: <https://ccsa.ca/sites/default/files/2023-03/Cannabis-Legalization-Home-Cultivation-policy-brief.pdf>.
3. Fischer B, Lindner SR, Jutras-Aswad D, Hall W. **Cannabis use and health-related 'harm-to-others': Towards a conceptual framework and evidence-base for public health**. *J Stud Alcohol Drugs*. 2023. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36971753>.
4. González-Sala F, Tortosa-Pérez M, Peñaranda-Ortega M, Tortosa F. **Effects of Cannabis Legalization on Road Safety: A Literature Review**. *Int J Environ Res Public Health*. 2023;20(5):4655. Available from: <https://www.mdpi.com/1660-4601/20/5/4655>.
5. Mourino N, Pérez-Ríos M, Yolton K, Lanphear BP, Chen A, Buckley JP, et al. **Pre- and postnatal exposure to secondhand tobacco smoke and cardiometabolic risk at 12 years: Periods of susceptibility**. *Environ Res*. 2023;224:115572. Available from: <https://doi.org/10.1016/j.envres.2023.115572>.
6. Public Ontario Agency for Health Protection and Promotion (Public Health Ontario). **Cannabis harms**. Toronto, ON: Queen's Printer for Ontario; 2023 [updated Mar]; Available from: https://www.publichealthontario.ca/en/Data-and-Analysis/Substance-Use/Cannabis-Harms?_cldee=ne6jf0JQgBfmdm40taeTqJlwzlhs7W7xCVksWn0Yen2eliTEN_w9aMmgbv39Mu0L&recipientid=contact-c7ccc0a5b4a2e611837d0050569e0009-cf3c1bb373604b33b74de465d1a6e96a&esid=55b291c7-34d9-ed11-817f-005056ad61b6.

WASTE

1. Parida VK, Saidulu D, Bhatnagar A, Gupta AK, Afzal MS. **A critical assessment of SARS-CoV-2 in aqueous environment: Existence, detection, survival, wastewater-based surveillance, inactivation methods, and effective management of COVID-19**. *Chemosphere*. 2023;327. Available from: <https://doi.org/10.1016/j.chemosphere.2023.138503>.

2. Wirsig K, Harris B, Wallis A, Barker C. **Left holding the bag. a survey of plastic packaging in Canada's grocery stores.** Ottawa, ON: Environmental Defence Canada; 2023 Apr. Available from: <https://environmentaldefence.ca/report/left-holding-the-bag-plastic-packaging-in-grocery-stores/>.
3. World Health Organization. **Assessing the health impacts of waste management in the context of the circular economy.** Copenhagen, Denmark: World Health Organization, Regional Office for Europe; 2023. Available from: <https://apps.who.int/iris/handle/10665/366667>.

ZOONOSES

1. Aznar E, Casas I, González Praetorius A, Ruano Ramos MJ, Pozo F, Sierra Moros MJ, et al. **Influenza A(H5N1) detection in two asymptomatic poultry farm workers in Spain, September to October 2022: suspected environmental contamination.** *Eurosurveillance.* 2023;28(8):2300107. Available from: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2023.28.8.2300107>.
2. Ballman ES, Leahy JE, Sponarski CC, Galli MG, Gardner AM. **A citizen science approach to investigate the distribution, abundance, and pathogen infection of vector ticks through active surveillance.** *Ticks Tick Borne Dis.* 2023;14(3):102144. Available from: <https://www.sciencedirect.com/science/article/pii/S1877959X23000262>.
3. Belluco S, Bertola M, Montarsi F, Di Martino G, Granato A, Stella R, et al. **Insects and Public Health: An Overview.** *Insects.* 2023;14(3):240. Available from: <https://www.mdpi.com/2075-4450/14/3/240>.
4. Bruno A, Alfaro-Núñez A, Mora D, Armas R, Olmedo M, Garcés J, et al. **First case of human infection with highly pathogenic H5 avian influenza a virus in South America: a new zoonotic pandemic threat for 2023?** *J Travel Med.* 2023. Available from: <https://doi.org/10.1093/jtm/taad032>.
5. Canadian Food Inspection Agency. **Pets and H5N1 highly pathogenic avian influenza (HPAI).** Ottawa, ON: CFIA; 2023 Apr 1. Available from: <https://inspection.canada.ca/animal-health/terrestrial-animals/diseases/reportable/avian-influenza/pets-and-h5n1/eng/1375992449648/1375992451039>.
6. Cotter CJ, Ferradas C, Ludwig S, Dalton K, Larsen J, Laucks D, et al. **Risk factors for meticillin-resistant Staphylococcus aureus (MRSA) carriage in MRSA-exposed household pets.** *Veterinary dermatology.* 2023;34(1):22-7. Available from: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=mnh&AN=36331035&site=ehost-live&scope=site&custid=s5672194>.
7. D'Amore C, Grimaldi P, Ascione T, Conti V, Sellitto C, Franci G, et al. **West Nile Virus diffusion in temperate regions and climate change. A systematic review.** *Infez Med.* 2022;31(1):20-30. Available from: <https://doi.org/10.53854/liim-3101-4>.
8. Devnath P, Karah N, Graham JP, Rose ES, Asaduzzaman M. **Evidence of Antimicrobial Resistance in Bats and Its Planetary Health Impact for Surveillance of Zoonotic Spillover Events: A Scoping Review.** *Int J Environ Res Public Health.* 2023;20(1):243. Available from: <https://www.mdpi.com/1660-4601/20/1/243>.

9. Gibbens S. **A deadly fungus with mysterious origins is raising alarms.** National Geographic. 2023 Apr 13. Available from: <https://www.nationalgeographic.com/environment/article/candida-auris-deadly-fungus-climate-change>.
10. Jiang X, Fan Z, Li S, Yin H. **A Review on Zoonotic Pathogens Associated with Non-Human Primates: Understanding the Potential Threats to Humans.** Microorganisms. 2023;11(2):246. Available from: <https://www.mdpi.com/2076-2607/11/2/246>.
11. Kupferschmidt K. **From bad to worse. How the avian flu must change before it can trigger a human pandemic.** Science. 2023. Available from: <https://www.science.org/content/article/bad-worse-avian-flu-must-change-trigger-human-pandemic>.
12. Little S. **Fungus behind disease ravaging bat populations found in southeastern B.C.** Global News. 2023 Apr 3. Available from: <https://globalnews.ca/news/9599823/bat-fungus-white-nose-syndrome-b-c/>.
13. Lyman M, Forsberg K, Sexton DJ, Chow NA, Lockhart SR, Jackson BR, et al. **Worsening Spread of Candida auris in the United States, 2019 to 2021.** Ann Intern Med. 2023. Available from: <https://www.acpjournals.org/doi/abs/10.7326/M22-3469>.
14. Manwar HG, Khan RAH. **A Review on Vector Borne Diseases and Controlling Challenges.** Journal of Algebraic Statistics. 2022;13(2):398-409. Available from: <https://publishoa.com/index.php/journal/article/view/181>.
15. Nirappil F. **Deadly fungal infection rapidly spreading in U.S. health facilities.** Washington Post. 2023 Mar 20. Available from: <https://www.washingtonpost.com/health/2023/03/20/candida-auris-fungus-infection/>.
16. Olson E. **What is Babesiosis? A rare tick-borne disease is on the rise in the Northeast.** National Public Radio. 2023 Mar 17. Available from: <https://www.npr.org/2023/03/17/1164291434/babesiosis-tick-disease-northeast>.
17. Ostfeld RS, Mowry S, Bremer W, Duerr S, Evans AS, Jr., Fischhoff IR, et al. **Impacts Over Time of Neighborhood-Scale Interventions to Control Ticks and Tick-Borne Disease Incidence.** Vector Borne Zoonotic Dis. 2023;23(3):89-105. Available from: <https://doi.org/10.1089/vbz.2022.0094>.
18. Parveen S, Garzon-Orjuela N, Amin D, McHugh P, Vellinga A. **Public Health Interventions to Improve Antimicrobial Resistance Awareness and Behavioural Change Associated with Antimicrobial Use: A Systematic Review Exploring the Use of Social Media.** Antibiotics. 2022;11(5):669. Available from: <https://www.mdpi.com/2079-6382/11/5/669>.
19. Pelletier J, Guillot C, Rocheleau J-P, Bouchard C, Baron G, Bédard C, et al. **The added value of One Health surveillance: data from questing ticks can provide an early signal for anaplasmosis outbreaks in animals and humans.** Can J Public Health. 2023;114(2):317-24. Available from: <https://doi.org/10.17269/s41997-022-00723-8>.
20. Rochlin I, Egizi A, Narvaez Z, Bonilla DL, Gallagher M, Williams GM, et al. **Microhabitat modeling of the invasive Asian longhorned tick (Haemaphysalis longicornis) in New Jersey, USA.** Ticks Tick Borne Dis. 2023;14(2):102126. Available from: <https://www.sciencedirect.com/science/article/pii/S1877959X23000080>.

21. UK Health Security Agency. **HAIRS risk assessment: tick-borne encephalitis**. London, UK: UK Government; 2023 Apr 5. Available from: <https://www.gov.uk/government/publications/hairs-risk-assessment-tick-borne-encephalitis>.
22. US Centers for Disease Control and Prevention. **Trends in Reported Babesiosis Cases — United States, 2011–2019**. Atlanta, GA: CDC; 2023 Mar 17. Available from: https://www.cdc.gov/mmwr/volumes/72/wr/mm7211a1.htm?s_cid=mm7211a1_w.
23. US Centers for Disease Control and Prevention. **Tracking Candida auris**. Atlanta, GA: US CDC; 2023 Feb 14. Available from: <https://www.cdc.gov/fungal/candida-auris/tracking-c-auris.html>.
24. Vazquez Guillamet L, Marx G, Benjamin W, Pappas P, Lieberman NAP, Bachiashvili K, et al. **Relapsing Fever Caused by Borrelia lonestari after Tick Bite in Alabama, USA**. Emerging Infectious Disease journal. 2023;29(2):441. Available from: https://wwwnc.cdc.gov/eid/article/29/2/22-1281_article.
25. Vreman S, Kik M, Germeraad E, Heutink R, Harders F, Spierenburg M, et al. **Zoonotic Mutation of Highly Pathogenic Avian Influenza H5N1 Virus Identified in the Brain of Multiple Wild Carnivore Species**. Pathogens. 2023;12(2):168. Available from: <https://www.mdpi.com/2076-0817/12/2/168>.
26. Wilson AG, Fehlner-Gardiner C, Wilson S, Pierce KN, McGregor GF, Gonzalez C, et al. **Assessing the extent and public health impact of bat predation by domestic animals using data from a rabies passive surveillance program**. PLOS Glob Public Health. 2022;2(5):e0000357. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36962180>.

COVID-19 ADDITIONAL TOPICS & GUIDANCE



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GUIDANCE (for ‘Occupational Guidance’ – see separate topic heading)

Policy

1. Agyapon-Ntra K, McSharry PE. **A global analysis of the effectiveness of policy responses to COVID-19.** *Sci Rep.* 2023;13(1):5629. Available from: <https://doi.org/10.1038/s41598-023-31709-2>.
2. Dahl E. **Lessons from COVID-19: Intelligence Failures and How to Prepare for the Next Global Crisis.** New York, NY: New York University; 2023 [updated Apr 12]; Available from: <https://policycommons.net/artifacts/3533974/lessons-from-covid-19/>.
3. Gebeyehu DT, East L, Wark S, Islam MS. **Indirect positive health outcomes of COVID-19: a systematic review.** *Public Health.* 2023;218:149-59. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/37040687>.
4. Indigenous Services Canada. **Developing laws and regulations for First Nations drinking water and wastewater: engagement 2022 to 2023.** Ottawa, ON: Government of Canada; 2023 Mar 17. Available from: <https://www.sac-isc.gc.ca/eng/1330528512623/1533729830801>.
5. Yu CC, Tang B, Low JA, Mathew M, Straus S, Fahim C. **A qualitative study on health stigma and discrimination in the first year of the COVID-19 pandemic: Lessons learnt from a public health perspective.** *Front Public Health.* 2023;11:1143640. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/36935669>.

Non-Pharmaceutical Interventions, etc

1. Høeg TB, Prasad VK. **An evidence double standard for pharmacological versus non-pharmacological interventions: Lessons from the COVID-19 pandemic.** *Contemp Clin Trials Commun.* 2023;33:101108. Available from: <https://doi.org/10.1016%2Fj.conctc.2023.101108>.
2. McMillan G, Abdullah K, Hussain J, Chan E, Van Allen Z, Palumbo A, et al. **COVID-19 Living Evidence Synthesis #19: Effectiveness of interventions for promoting adherence to PHSMs for preventing COVID-19 and other respiratory infections in non-health care community-based settings.** Hamilton, ON: McMaster Health Forum; 2023 2023-02-07. Available from: <https://policycommons.net/artifacts/3446788/covid-19-living-evidence-synthesis-19/>.
3. Wilson M. **COVID-19 Living Evidence Synthesis 14.1: Effectiveness of masks for reducing transmission of COVID-19 and other respiratory infections in non-health care community-based settings.** Hamilton, ON: McMaster Health Forum; 2023 Feb 7. Available from: <https://policycommons.net/artifacts/3446810/covid-19-living-evidence-synthesis-141/>.
4. Hartling L, Bialy L, Dandnaya D, Fleck B, Covid-End PHSM Les Working Group. **COVID-19 Living Evidence Synthesis 15.2: Effectiveness of ventilation for reducing transmission of COVID-19 and other respiratory infections in non-health care community-based settings.** Hamilton, ON: McMaster Health Forum; 2023 Mar 9. Available from: <https://policycommons.net/artifacts/3528915/covid-19-living-evidence-synthesis-152/>.
5. Neil-Sztramko S, Hagerman L, Thai A, Traynor R, Hopkins S, Stoby K, et al. **COVID-19 Living Evidence Synthesis 16.1a: Effectiveness of measures to reduce contacts for reducing transmission of COVID-19 and other respiratory infections in non-health care community-based settings.**

- Hamilton, ON: McMaster Health Forum; 2023 Feb 7. Available from: <https://policycommons.net/artifacts/3446813/covid-19-living-evidence-synthesis-161a/>.
6. Neil-Sztramko S, Hagerman L, Thai A, Traynor R, Hopkins S, Stoby K, et al. **COVID-19 Living Evidence Synthesis 16.2b: Effectiveness of physical distancing in reducing transmission of COVID-19 and other respiratory infections in non-health care community-based settings.** Hamilton, ON: McMaster Health Forum; 2023 Mar 9. Available from: <https://policycommons.net/artifacts/3528914/covid-19-living-evidence-synthesis-162b/>.
 7. Velásquez-Salazar P, Marin-Orozco IC, Patiño-Lugo DF, Florez ID, Covid-End PHSM Les Working Group. **COVID-19 Living Evidence Synthesis 18.2: Effectiveness of Cleaning and Disinfecting for reducing transmission of COVID-19 and other respiratory infections in non-health care community-based settings.** Hamilton, ON: McMaster Health Forum; 2023 Mar 9. Available from: <https://policycommons.net/artifacts/3528902/covid-19-living-evidence-synthesis-182/>.
 8. Vélez C, Wilson MG, Waddell K, DeMaio P, Lavis J, Covid-End PHSM Les Working Group. **COVID-19 Living Evidence Synthesis 20.2: Effectiveness of combinations of public health and social measures over time and across jurisdictions for reducing transmission of COVID-19 and other respiratory infections in non-healthcare community-based.** Canada: McMaster Health Forum; 2023 Mar 9. Available from: <https://policycommons.net/artifacts/3528904/covid-19-living-evidence-synthesis-202/>.

HOMELESS, VULNERABLE POPULATIONS, HOUSING

MENTAL HEALTH

1. Phalswal U, Pujari V, Sethi R, Verma R. **Impact of social media on mental health of the general population during Covid-19 pandemic: A systematic review.** J Educ Health Promot. 2023;12:23. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/37034873>.

MULTI-UNIT BUILDINGS

1. Public Ontario Agency for Health Protection and Promotion (Public Health Ontario). **COVID-19 Preparedness and prevention in congregate living settings [checklist].** Toronto, ON: Queen's Printer for Ontario; 2023 Mar. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/cong/2020/05/covid-19-preparedness-prevention-congregate-living-settings.pdf?la=en>.
2. Public Ontario Agency for Health Protection and Promotion (Public Health Ontario). **Managing COVID-19 outbreaks in Congregate Living Settings (CLS) [checklist].** Toronto, ON: Queen's Printer for Ontario; 2023 Mar. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/cong/2020/05/managing-covid-19-outbreaks-congregate-living-settings.pdf?la=en>.

OCCUPATIONAL GUIDANCE

PUBLIC FACILITIES

Transportation (see separate category, 'Transit, Transportation')

SURVIVAL TIME

TRANSIT, TRANSPORTATION

TRANSMISSION

1. Chang Y, Wang Y, Li W, Wei Z, Tang S, Chen R. **Mechanisms, Techniques and Devices of Airborne Virus Detection: A Review.** Int J Environ Res Public Health. 2023;20(8):5471. Available from: <https://www.mdpi.com/1660-4601/20/8/5471>.
2. Crits-Christoph A, Gangavarapu K, Pekar JE, Moshiri N, Singh R, Levy JI, et al. **Genetic evidence of susceptible wildlife in SARS-CoV-2 positive samples at the Huanan Wholesale Seafood Market, Wuhan: Analysis and interpretation of data released by the Chinese Center for Disease Control.** Zenodo; 2023 Mar 20. Available from: <https://zenodo.org/record/7754299>.
3. Dougherty B, Forrest RO, Smith CR, Morton V, Sherk LM, Avery B, et al. **Impact of the COVID-19 Pandemic on the Reported Incidence of Select Bacterial Enteric Diseases in Canada, 2020.** Foodborne Pathog Dis. 2023;20(3):81-9. Available from: <https://www.liebertpub.com/doi/abs/10.1089/fpd.2022.0064>.
4. Garcia de Jesús E. **How raccoon dog DNA fits into the COVID-19 origins debate.** Sci News. 2023 Mar 23. Available from: <https://www.sciencenews.org/article/raccoon-dog-dna-covid-origins-debate>.
5. Liu WJ, Liu P, Lei W, Jia Z, He X, Shi W, et al. **Surveillance of SARS-CoV-2 at the Huanan Seafood Market.** Nature. 2023. Available from: <https://doi.org/10.1038/s41586-023-06043-2>.

Outbreaks (selected)

1. Cox MB, McGregor MJ, Poss J, Harrington C. **The association of facility ownership with COVID-19 outbreaks in long-term care homes in British Columbia, Canada: a retrospective cohort study.** CMAJ Open. 2023;11(2):E267-e73. Available from: <https://doi.org/10.9778/cmajo.20220022>.

Variants

1. Weiss H. **What to Know About the New XBB.1.16 COVID-19 Variant.** Time. 2023. Available from: <https://time.com/6268467/omicron-subvariant-xbb116-covid-19/>.

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

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