

POSITION STATEMENT



Antimicrobial Products

This document was developed by IPAC Canada based on best available evidence at the time of publication, to provide advice to Infection Prevention and Control Professionals. The application and use of this document are the responsibility of the user. IPAC Canada assumes no liability resulting from any application or use.

Background

The use of antimicrobial products in the home has grown rapidly over the past two decades.¹ While the majority of these products are in cosmetic or skin antiseptics, such as antibacterial soaps and body washes, antimicrobial agents are also used as preservatives in natural health products, such as pest-control products,^{2,3} and impregnated in numerous domestic products (e.g., clothing, toys, kitchen utensils, towels and bedding).⁴ Some antimicrobial agents, such as triclosan, may build up in the environment and accumulate in household dust, increasing exposure for those in the home, especially small children^{1,2}, and in water, impacting ecosystems and wildlife.^{2,3} Toxic by-products of triclosan have potential to cause hormone disruption and cancer.⁵⁻⁷

The use of antibacterial products in the home may do little to prevent household illness as most common household illnesses are caused by viruses.⁸ Long-term regular use of antimicrobial products may also lead to the development of antimicrobial resistance.⁹ In light of this information, both Public Health Agency of Canada and the Food and Drug Administration in the United States are requiring manufacturers to prove the safety and efficacy of antibacterial products.¹⁰⁻¹¹ To date there is no evidence to indicate that antimicrobial products are safer or more effective than plain soap and water.¹¹

Note regarding hand hygiene products: Antibacterial soap should not be confused with alcohol-based hand rubs (ABHRs) which contain alcohol. ABHRs are effective in killing most germs, including bacteria and viruses, on the surfaces of hands. Alcohol-based hand rubs do not contain chemicals that are harmful to the environment and do not promote the development of resistance. These products can be used as an effective alternative to hand washing with plain soap and water as long as hands are not visibly soiled.

Even within the healthcare setting, plain soap is used for hand cleaning. Antibacterial soap may be considered for use in critical care areas such as intensive care and burn units where patients are highly susceptible to infection. Antibacterial soap is generally not required and not recommended in other care areas.¹²

In response to international focus on transmission of organisms from high touch surfaces during the SARS-CoV-2 pandemic, surfaces and coatings capable of minimizing the presence of active viral pathogens are being explored in settings beyond health care, including public transport, schools, and

businesses¹³. However, their use does not preclude thorough cleaning and disinfection, and their application in household settings has yet to be warranted.

Position Statement

In community/home settings, the use of antimicrobial products, including textiles and animal and personal care products such as soaps, has not been found to be of additional benefit and may have adverse effects related to their chemical ingredients. Therefore, their use in community settings is not recommended. Emphasis should continue to be placed on effective hand washing with plain soap, good personal hygiene, safe food preparation, and basic home cleanliness.

Glossary/Definitions

Antibacterial: Inhibits the growth of or kills bacteria

Antimicrobial: Inhibits the growth of or kills microbes including bacteria, viruses, fungi, and parasites

Community: A population of humans in a geographic area. For the purposes of this document, people outside of hospital or congregate living settings.

Community-based health care: Healthcare assistance for people at home/in the community.

Home: One's place of residence.

Stakeholders

Infection Prevention and Control Professionals, healthcare workers, and their clients.

Participants in Development of Position Statement

This position statement was developed by Standards and Guidelines Committee and reviewed in collaboration with the Environmental Health Interest Group.

Chair: Madeleine Ashcroft

Original Authors: Elizabeth Watson, Mark Heller, Tara Donovan, Anne Augustin, Christine Franic, Erin Roberts, Colleen Lambert, Hilary McIver, Laurie Rodnick, Cara-Lee Coghill, Monica MacDonald

References

- Levy SB. Antibacterial household products: cause for concern. Emerging infectious diseases. 2001;7(3 Suppl):512: [cited 2024 Feb 06]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2631814/
- Health Canada Environment and Climate Change Canada. Canadian Environmental Protection Act, 1999. Federal Environmental Quality Guidelines, Triclosan. December 2017: [cited 2024 Feb 06]. Available from:

https://www.canada.ca/content/dam/eccc/documents/pdf/pded/triclosan/English%20Canadian %20Environmental%20Protection%20Act%201999%20Federal%20Environmental%20Quality%2 0Guidelines.pdf

- 3. Government of Canada. Trisclosan. 2019: [cited 2024 Feb 06]. Available from: https://www.canada.ca/en/health-canada/services/chemicals-product-safety/triclosan.html
- Allen UD, Canadian Paediatric Society (CPS) Infectious Diseases and Immunization Committee. Antimicrobial products in the home: The evolving problem of antibiotic resistance. Paediatr Child Health 2006;11(3):169-173: [cited 2024 Feb 06]. Available from: https://doi.org/10.1093/pch/11.3.169
- 5. Thorpe B. for the Canadian Environmental Law Association. Chemicals in consumer products are draining trouble into the Great Lakes ecosystem: GreenScreen® assessment shows triclosan and triclocarban should be avoided. July 2014: [cited 2024 Feb 06]. Available from: https://cela.ca/wp-content/uploads/2019/07/TC-TCC-CELA-997_0.pdf
- Dhillon GS, Kaur S, Pulicharla R, Brar SK, Cledón M, Verma M, Surampalli RY. Triclosan: Current status, occurrence, environmental risks and bioaccumulation potential. Int J Environ Res Public Health. 2015 May 22;12(5):5657-5684: [cited 2024 Feb 06]. Available from: https://www.ncbi.nlm.nih.gov/pubmed/26006133
- Bedoux G, Roig B, Thomas O, Dupont V, Le Bot B. Occurrence and toxicity of antimicrobial triclosan and by-products in the environment. Environ Sci Pollut Res Int. 2012 May;19(4):1044-1065: [cited 2024 Feb 06]. Available from: https://www.ncbi.nlm.nih.gov/pubmed/22057832
- Barker J, Stevens D, Bloomfield SF. Spread and prevention of some common viral infections in community facilities and domestic homes. Journal of applied microbiology. 2001 Jul 1;91(1):7-21: [cited 2024 Feb 06]. Available from: https://academic.oup.com/jambio/articleabstract/91/1/7/6724008
- Food and Drug Administration. Safety and Effectiveness of Consumer Antiseptics; Topical Antimicrobial Drug Products for Over-the-Counter Human Use. September 6, 2016: [cited 2024 Feb 06]. Available from: https://www.federalregister.gov/documents/2016/09/06/2016-21337/safety-and-effectiveness-of-consumer-antiseptics-topical-antimicrobial-drug-productsfor
- Public Health Agency of Canada (PHAC). The Chief Public Health Officer's report on the state of public health in Canada, 2013. Infectious Diseases -The never ending threat. Antimicrobial resistance-a shared responsibility. 2013: [cited 2024 Feb 06]. Available from: http://www.phacaspc.gc.ca/cphorsphc-respcacsp/2013/assets/pdf/2013-eng.pdf
- 11. PHAC. The Chief Public Health Officer's spotlight report, 2017. Handle with Care: Preserving Antibiotics Now and into the Future: Evidence synthesis summary: interventions to address antimicrobial use. [cited 2024 Feb 06]. Available from: https://www.canada.ca/en/public-health/services/publications/drugs-health-products/interventions-address-antimicrobial-use.html
- Food and Drug Administration. Antibacterial Soap? You Can Skip It -- Use Plain Soap and Water.
 2016 Sep 02: [cited 2024 Feb 06]. Available from: http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm378393.htm
- Imani SM, Ladouceur L, Marshall T, Maclachlan R, Soleymani L, Dida TF. Antimicrobial nanomaterials and coatings: Current mechanisms and future perspectives to control the spread of viruses Including SARS-CoV-2. ACS Nano. 2020;14(10):12341-12369: [cited 2024 Feb 06]. Available from: https://doi.org/10.1021/acsnano.0c05937

Publication Date

Original:	2002 November
-----------	---------------

Revised:	2005 March
neviseu.	2003 1010101

Revised: 2017 July

Revised: 2024 January