

CORRESPONDENCE

Frequent handwashing amidst the COVID-19 outbreak: prevention of hand irritant contact dermatitis and other considerations

Coronavirus disease 2019 (COVID-19) primarily spreads via respiratory droplets, but it can also spread via contact with contaminated surfaces or objects.^{1,2} Thus, hand hygiene is a cornerstone of effective infection control during the COVID-19 outbreak.

Frequent handwashing, however, can lead to eczema. On the one hand, frequent handwashing is important for stopping the cycle of sustained transmission of COVID-19; on the other, the frequent use of hygiene products, particularly harsh soaps and other potent detergents, can be associated with irritant contact dermatitis³ and related complications including methicillin-resistant *Staphylococcus aureus* colonization, particularly in critical workplaces such as intensive care units, emergency care, and isolation wards during an ongoing epidemic.⁴

Here, I offer some tips to help prevent irritant contact dermatitis of the hands due to frequent handwashing during this COVID-19 outbreak:

- 1 Educational programs should concern the proper steps of hand washing and skin barrier protection, including tips and techniques for proper washing, drying, and frequent use of emollients for the prevention of irritant contact dermatitis.
- 2 Use soap-free cleanser (synthetic detergent vs harsh soaps and potent detergents) with water if hands are visibly soiled or dirty. Since synthetic detergents have a neutral or slightly acidic pH and have relatively high free fatty acid content, these are less irritating for the skin and have a moisturizing effect, helping prevent dryness and hand irritation.^{5,6}
- 3 Use alcohol-based cleansers or other antibacterial hand rub for cleaning and disinfecting hands when they are not visibly dirty.
- 4 Use lukewarm water (45°C–50°C)⁷ rather than hot water, particularly when hands are cold. Water temperature during washing has an important effect on the onset of irritant contact dermatitis, and frequent use of hot water can lead to excessively dry skin. Extreme dry skin can develop into skin irritation and inflammation, and may even increase irritant contact dermatitis.⁸
- 5 Avoid having wet hands and use proper hand-drying processes. Given the role of residual water on the hands in the level of touch- or contact-associated contamination,⁹ proper drying of hands after washing should be an essential component of hand hygiene procedures. From a hygiene viewpoint, paper towels are superior to electric air dryers.¹⁰

- 6 Apply an ointment-based emollient during work time after hand washing and after work, at home, to support the regeneration of the skin barrier.¹¹
- 7 Avoid a water-based moisturizer (humectant) alone (eg, glycerin, panthenol, urea, gelatin, hyaluronic acid, alpha hydroxy acids), as it can enhance trans-epidermal water loss and can also cause potential dryness as the water contents evaporate.^{12,13}
- 8 Ensure proper and reasonable use of gloves, and change gloves frequently during prolonged work periods, especially healthcare workers.
- 9 Avoid coming into direct contact with chemicals that are used for surface disinfection.
- 10 Use anti-inflammatory topical medication under the supervision of a specialist, when needed. Proper and on-time treatment of irritant contact dermatitis can prevent increases in the severity of the condition and subsequent complications.

By using the above-mentioned strategies, irritant contact dermatitis may be effectively prevented.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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