

Skin Care and PPE (updated)

Prolonged use of personal protective equipment (PPE) like gloves, surgical masks, N95 masks, goggles, and face shields can cause irritant and allergic contact dermatitis amongst health care workers. Irritant contact dermatitis (ICD) accounts for about 80% of work-related contact dermatitis.¹



Risk factors for ICD include¹⁻⁴

- Wearing PPE > 4-6 hours per day
- Hand hygiene > 10 times per day
- Wearing an ill-fitted mask
- History of atopic dermatitis, sensitive skin, or dermatoses



What else could it be? (Differential diagnosis)¹

- Allergic contact dermatitis often appears very similar to ICD
- Atopic dermatitis
- Psoriasis
- Hand eczema
- Fungal infection
- Scabies

Prevention of irritant contact dermatitis:^{1, 4-9}

- **Hand hygiene:**
 - When washing hands, use lukewarm water, make sure hands are wet before using soap, and pat hands dry (do not rub)
 - Moisturize before/after work and every time after changing or removing PPE
 - Use regular moisturizer (e.g. Phytoplex) for healthy skin
 - Use creams with ceramide, hyaluronic acid, or vitamin E for irritated skin
 - Avoid barrier creams and ointments at work due to high risk of cross-contamination
 - Avoid urea-containing creams unless specifically advised by a physician
 - Use gloves only when necessary and for as short a duration as possible. Double gloving adds to skin irritation and is strongly discouraged.
- **Masks and goggles:**
 - Masks and goggles should be properly fitted. Double masking is discouraged for lack of efficacy and increased risk of irritation (unless recommended by People Safety)
 - Use masks that are not ear-dependent when possible (e.g. with ties, 3D-printed ear savers, buttons sewn on a headband or surgical cap)

Remediation of irritant contact dermatitis^{1, 6-9}

- Minimize contact with offending agent as much as is practicable
- Continue moisturizing
- Apply Cavilon spray or dressing (e.g. DuoDERM Extra Thin, Mepilex, TegaDERM) to skin fissures, cuts, and lacerations on hands or face (not under N95 masks).



Click [here](#) for more information on remediation steps and products that may be available in VCH for PPE-related skin injury. It is important to determine if it is allergic or irritant contact dermatitis in order to treat this properly and prevent recurrence.

Additional resources

1. Fransway, AF. Irritant contact dermatitis in adults <https://www.uptodate.com/contents/irritant-contact-dermatitis-in-adults>
2. Lin P, et al. British J Derm 2020;10.1111.
3. Lan J, et al. J Am Acad Dermatol 2020;82(5):1215-6
4. Desai SR, et al. J Am Acad Dermatol 2020; S0190-9622(20).
5. Gefen A & Ousey K. J Wound Care 2020;29(5):245-259.
6. MacGibeny MA & Wassef C. Arch Dermatol Res 2020;1-3.
7. Fraser Health Authority. Guideline for Skin Protection: Hands. 2020.
8. Fraser Health Authority. Guideline for Skin Protection: Face (Masks and Eyewear). 2020.
9. Lee H & Goh C. J Eur Acad Dermatol Venereol 2020;35:589-96.

If you have any questions or concerns, or would like to consult with a POSH physician, please email us at posh.covid@ubc.ca. POSH operates 8 a.m. to 8 pm, Monday to Saturday.

