

Skin protection for PPE use

For health care workers

The continuous, extended and repetitive use of personal protective equipment (PPE), including masks, gloves and safety glasses/goggles may cause adverse skin reactions.

This document provides general guidance to health care workers (HCWs) on how to prevent and manage PPE-related skin damage.

The main symptoms HCWs can experience may include: burning, itching, stinging, contact dermatitis, hives, ulcers, scaling, blisters, cracks, and open rashes.

Factors that may contribute to skin irritation include:

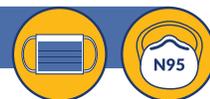
- a. **For masks:**
length of wear time, pressure, friction, sweating, the use of cosmetics and skin products.
- b. **For gloves:**
frequency of hand hygiene, length of wear time, sweating, previous sensitizations, generic predisposition to allergies and eczema, and lack of hand care.

Note:

It is the responsibility of each HCW to verify with their institutional Infection Control or Workplace Health teams that any measures taken to prevent or manage PPE-related skin injuries do not interfere with the efficacy of PPE or contradict workplace policies.

A Strategies to prevent skin damage from prolonged PPE use

1 Medical masks and respirators



Follow proper practices for wearing a mask:

- a. You can adjust the metal piece to your nose before putting it on and alternate the placement slightly to avoid friction over the same area when you use it.
- b. Make sure the mask fits properly. If using a respirator, perform a seal check after adjusting it.
- c. If ears are irritated, use a mask with ties instead of ear loops, or use items to pull away the ties from ears if available and approved by your organization.

2 Eye protection



- a. Safety goggles are a barrier to droplets and splashes and only need to be tightened to secure the goggle to your face.
- b. Over-tightening goggles may irritate your skin.
- c. Wash the straps with plain soap and water to prevent irritation from sweat.

3 Gloves



- a. Gloves are not required to be worn for every task.
- b. Glove use should be based on the task and point of care risk assessment (PCRA).
- c. Wear gloves for just the time needed, as wearing them for extended periods of time can increase the risk of skin irritation from moisture within the gloves.

4 Hand hygiene



Perform hand hygiene before and after wearing or taking off your PPE.

- a. Follow the proper steps for hand hygiene.
- b. To make hand washing less harsh, use lukewarm water and wet your hands first, then use soap. If your hands are irritated, you can exchange the use of regular soap for a cleanser. Finally, be gentle when drying your hands.
- c. At home, use plain soaps or cleansers (these are more protective of your skin oils) and cosmetic products that are low in irritants and for sensitive skin.

5 Moisturize



When to moisturize:

- For your face:** moisturize day and night and more frequently if needed.
- For your hands:** moisturize before and after work, and regularly throughout the workday — especially in winter when the air is drier. If your skin is irritated, moisturize every time you wash your hands, use hand sanitizer, or change PPE during shift.

How to moisturize:

- Use a small amount of moisturizer (size of a pearl) that will not leave an excessive layer on your skin, but enough to prevent skin dryness.
- To moisturize hands efficiently at work, focus on your fingers, fingertips and back of the hand. Only moisturize your palms if you have dry, irritated skin in that area.



Which moisturizer to use:

- Use water-based moisturizers for normal skin.
- At work, **DO NOT** use barrier creams (moisturizers with high concentrations of silicone, methicone or dimethicone), ointments or oil-based moisturizers such as petrolatum or petroleum jelly, as they increase risk of cross contamination.
- Do not use moisturizers with more than 5% urea as they may, over time, cause your skin to thin.
- At home, use plenty of moisturizer to condition your skin frequently, such as every time after washing your face, hands, or taking a shower. Products containing petrolatum or petroleum jelly may be used at home.

References

Hand Care Course – Learning Hub – Fraser Health, Monica Herrera MHA, CDMP

PreLeBlanc, K., Heerschap, C., Butt, B., Bresnai-Harris, J., Wiesenfeld, L. (2020).

Fraser Health Authority. (2020). Guidelines for Skin Protection: Face and Hands

B Strategies to manage skin damage from prolonged PPE use

1 For skin redness, stinging, burning and dryness

- Use moisturizers that contain hyaluronic acid, ceramide, vitamin E or other repairing ingredients.
- Use moisturizer after you wash your hands or use alcohol-based hand rub.
- At home, use moisturizer frequently. Products containing >70% petrolatum/petroleum jelly can help your skin.

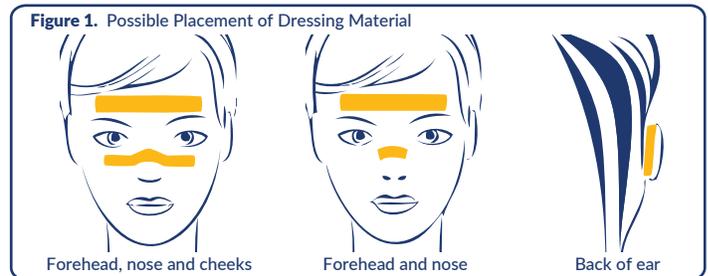
2 For small cuts or raw spots in the hands

- Follow all recommendations to moisturize skin in B1.
- Apply barrier film products to protect skin against friction and moisture. Warning: these contain acrylates, read label first if you are allergic.

3 For face indentations and pressure marks/sores

- Use dressing material such as thin foams with silicone, thin hydrocolloids or film dressings as an interface between PPE and the skin to protect areas that receive increased pressure (Figure 1). Use only if it does not disrupt the efficacy of PPE. Do not use with an N95 respirator or alternative unless you are fit-tested with the dressing in place.

Figure 1. Possible Placement of Dressing Material



- For instances of small cuts, linear fissures or lacerations, film-type dressings can help cover and protect the wound.
- If secondary infection is suspected, apply a thin layer of an over-the-counter topical antibiotic cream over lesioned skin.

4 For cases of delayed pressure hives/urticaria

- Review the fit of your PPE – a tight fit may increase the risk of pressure hives.
- The use of over-the-counter antihistamines may be helpful. Always follow product instructions.

2024.01.08