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Putting On / Taking Off PPE with N95 Respirators for Unstable or Confirmed Cases of Viral Hemorrhagic Fever (VHF)

Published: June 19, 2026

Putting On PPE with an N95 Respirator

Key considerations:

- The specific putting on and taking off instructions will vary depending on the Personal Protective Equipment (PPE) used. Organizations are to develop and adapt protocols that are suitable for the PPE they have selected (similar or higher level of protection than what is recommended in this document).
- Organizations ensure that health care workers (HCWs) are trained and have practiced safely and correctly putting on, using, and taking off PPE.
- Organizations ensure that HCWs demonstrate competency in PPE use before caring for a patient with suspect or confirmed VHF.
- PPE is stored and put on in a designated clean area outside of contaminated zone (patient care area).
- A mirror in the designated area can be useful for the HCW while putting on PPE.

☐ 1 – Gather recommended PPE*

- A fit-tested N95 respirator.
- Disposable full-face shield.
- Fluid resistant / impermeable hair / head / neck covering.
- Gloves (to use as inner gloves).
- Extended cuff gloves (to use as outer gloves).
- Impermeable long-sleeved, cuffed gown that covers to mid-calf and fluid resistant / impermeable shoe cover with / plus gaiters that come up to the knee **OR** impermeable coverall and fluid resistant / impermeable shoe covers / integrated sock. (Ensure gown or coverall is large enough to allow unrestricted freedom of movement).
- Apron (can be worn if coverall has zipper on the front).

*Refer to Infection Prevention and Control Management of Viral Hemorrhagic Fever in Acute Care for PPE specifications.

☐ **2 – Engage a trained observer**

- Engage a trained observer to guide and supervise the putting on process, ensuring they visually confirm that all PPE is functional and has been put on correctly.
- The trained observer should review the putting on sequence with the HCW prior to initiation and provide step-by-step guidance by reading each step aloud during the process.

☐ **3 – Before beginning, HCW should**

- Drink water and use bathroom.
- Remove jewellery, phones, pens, etc.
- Tie hair back.

☐ **4 – Perform hand hygiene**

☐ **5 – Put on shoe covers** (This step can be omitted if wearing a coverall with integrated socks)

- If a coverall without integrated socks is worn, the upper band of the boot cover will be worn under the pant leg of the coverall.

☐ **6 – Put on first pair of gloves (inner gloves)**

☐ **7 – Put on gown or coverall**

- Ensure cuffs of inner gloves are tucked under the sleeve of the gown or coverall.

☐ **8 – Put on N95 respirator**

- Complete seal check.

☐ **9 – Put on hair / head / neck covering**

- Ensure all of hair, ears and neck are covered and is extended past the neck to the shoulders.

☐ **10 – Put on outer apron** (if used)

Additional steps on next page →

☐ **11 – Put on outer gloves**

- Put on second pair of gloves (with extended cuffs).
- Ensure the cuffs are pulled over the sleeves of the gown or coverall.

☐ **12 – Put on full-face shield**

- Put on full-face shield over the N95 respirator and hair / head / neck covering to protect the eyes, as well as front and sides of the face.

☐ **13 – Movement Check**

- Ensure range of motion is adequate in PPE.

☐ **14 – Verify and Inspect**

- The trained observer will verify the integrity of the PPE while also ensuring there is no exposed skin.
- HCW can use a mirror to help with putting on PPE.

Taking Off PPE with an N95 Respirator

Key considerations:

- The specific putting on and taking off instructions will vary depending on the PPE used. Organizations are to develop and adapt protocols that are suitable for the PPE they have selected (similar or higher level of protection than what is recommended in this document).
- Organizations ensure that health care workers (HCWs) are trained and have practiced safely and correctly putting on, using, and taking off PPE.
- Organizations ensure that HCWs demonstrate competency in PPE use before caring for a patient with suspected or confirmed VHF.
- Designate an area or zone for PPE removal (e.g., anteroom or adjacent vacant patient room), if available. Alternatively, a clearly demarcated area inside the patient room near the door can be designated for PPE removal and not used for any other purpose.
- The designated PPE removal area should contain a leak-proof biohazard waste container, a stool that can be cleaned and disinfected, alcohol-based hand rub (ABHR), hospital-approved disinfectant wipes and a clean section where gloves can be stocked.
- Post signage within the designated area outlining each step of the process of taking off PPE.
- Take care to prevent self-contamination and contamination of the surroundings during removal.
- Discard all PPE in a leak-proof biohazard waste container.
- Frequently clean and disinfect the PPE removal area, including after each individual has removed PPE, if possible. This cleaning can be achieved by having environmental services put on PPE (minimum that of a stable patient) and clean the PPE removal area.
- A mirror can be useful for the HCW while taking off PPE.

☐ **1 – Engage a trained observer** (See putting on and taking off for sequence for trained observer)

- The taking off process should be supervised by a trained observer who reads out loud and/or points out each step of the removal sequence, confirms visually that the PPE has been removed properly, and monitors for potential self-contamination.
- A trained observer can assist with visual inspection for cuts, tears and/or contamination of PPE. Based on the organization's policies and procedures a trained observer can also assist with removing PPE.

☐ **2 – Inspect**

- Check PPE for visible contamination, cuts or tears. The trained observer can assist with this visual inspection.
- If any PPE is visibly contaminated, remove gross soil with disinfectant wipe.

☐ **3 – Disinfect outer gloves with ABHR**

Additional steps on next page →

☐ **Optional Step - Remove apron** (if used)

- Untie carefully and then roll and pull away from the body.
- Discard the apron in biohazard waste container.
- Disinfect outer gloves with ABHR.

☐ **4 – Remove outer gloves**

- Remove outer gloves using glove-to-glove technique to avoid contamination of the inner glove and discard in biohazard waste container.

☐ **5 – Inspect the inner gloves for visible contamination, cuts or tears**

- If no cuts or tears, disinfect inner-gloved hand with ABHR.
- If visibly soiled, cut or torn, disinfect inner-gloved hand with ABHR.

  Remove the inner gloves, taking care not to contaminate bare hands during removal, and discard in biohazard waste container, perform hand hygiene with ABHR on bare hands, allow hands to dry and put on a clean pair of gloves.

☐ **6 – Remove full-face shield**

- Remove the face shield by tilting the head slightly forward, grasping the rear strap and pulling it gently over the head and allowing the face shield to fall forward, then discard.
- Care must be taken not to touch the face when removing the face shield.
- Avoid touching the front surface of the face shield.
- Discard in biohazard waste container.

☐ **7 – Disinfect inner-gloved hand with ABHR**

☐ **8 – Remove hair / head / neck covering**

- Unfasten (if applicable) hair / head / neck covering, gently remove and discard in biohazard waste container.
- The trained observer can assist with unfastening hair / head / neck covering. If trained observer assists, disinfect gloved-hands with ABHR, remove gloves, and discard in biohazard waste container. Put on new gloves.

☐ **9 – Disinfect inner-gloved hand with ABHR**

Additional steps on next page →

☐ **10 – Remove and discard gown or coveralls**

Gown

- Unfasten the gown. The trained observer can assist with unfastening the gown. If trained observer assists, disinfect gloved-hands with ABHR, remove gloves, and discard in biohazard waste container. Put on new gloves.
- Pull gown away from body, rolling inside out, touching only the inside of the gown.
- Discard in biohazard waste container.

Coverall

- Tilt head back to reach zipper or fasteners.
- Unzip or unfasten coverall completely before rolling down and turning inside out.
- Avoid contact of clothing with outer surface of coverall during removal, touching only the inside of the coverall.
- Discard in biohazard waste container.

☐ **11 – Disinfect inner-gloved hand with ABHR**

☐ **12 – Remove shoe covers** (If coverall includes shoe covering move to next step)

- Remove shoe covers while sitting down on a clean designated stool.
- Discard shoe coverings in biohazard waste container.

☐ **13 – Disinfect shoes**

- Use a disinfectant wipe to wipe down external surface of shoes. Shoes should be washable.

☐ **14 – Disinfect designated stool with a disinfectant wipe**

☐ **15 – Disinfect inner-gloved hand with ABHR**

☐ **16 – Remove and discard inner gloves**

- Take care not to touch bare skin to the outside of the gloves.
- Discard gloves in the biohazard waste container.

☐ **17 – Perform hand hygiene with ABHR and allow hands to dry**

Additional steps on next page →

☐ **18 – Put on a pair of new inner gloves**

☐ **19 – Remove N95 respirator by straps**

- Do not touch the front of N95 respirator.
- Discard N95 respirator in the biohazard waste container.

☐ **20 – Disinfect inner-gloved hand with ABHR**

☐ **21 – Remove and discard gloves**

- Take care not to touch bare skin to the outside of the gloves during removal process.
- Discard gloves in biohazard waste container.

☐ **22 – Perform hand hygiene with ABHR and allow hands to dry**

☐ **23 – Perform a final inspection**

- Perform a final inspection for any indication of contamination of clothing or the body.
- The trained observer can assist with this inspection.
- HCW can use mirror during removal of PPE.

! In case of any contamination, report to your Infection Prevention and Control (IPAC) team / Occupational Health coordinator and follow safety steps as per organizational policy.

Sources

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infection prevention and control management of viral hemorrhagic fever in acute care. 2nd ed. Toronto, ON: King's Printer for Ontario; 2026. Available from: https://www.publichealthontario.ca/-/media/Documents/V/26/vhf-ipac-acute-care.pdf?&sc_lang=en

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Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Putting on / taking off PPE with N95 respirators for unstable or confirmed cases of viral hemorrhagic fever (VHF). Toronto, ON: King's Printer for Ontario; 2026.

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