

Personal protective equipment (PPE), putting on

Revised: June 14, 2019

Introduction

Standard and transmission-based precautions help prevent the spread of infection from patient to patient, from patient to health care worker, and from health care worker to patient.^{1 2 3 4 5} They also reduce the risk of infection in immunocompromised patients. Central to the success of these precautions is the selection of the proper personal protective equipment (PPE), such as gowns, gloves, masks, and eye protection, as well as adequate training of those who use them.⁶

◆ **Clinical alert:** For information on Coronavirus disease (COVID-19), please refer to the latest recommendations from the CDC, located at https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%253A%252F%252Fwww.cdc.gov%252Fcoronavirus%252F2019-ncov%252Fhcp%252Finfection-control.html, when caring for a patient with known or suspected Coronavirus disease.◆

◆ **Clinical alert:** Please refer to the latest recommendations from the Centers for Disease Control and Prevention located at <https://www.cdc.gov/vhf/ebola/clinicians/index.html>, when caring for a patient with known or suspected Ebola virus disease.◆

Equipment

Materials required for standard and transmission-based precautions typically include PPE, a cart or anteroom for storing equipment, and a door card or sign to alert staff members and others entering the room that transmission-based precautions are in effect.



Personal protective equipment:

- Fluid-resistant gown
- Gloves
- Goggles or face shield
- Mask or respirator (each staff member must be trained in its proper use)

Preparation of Equipment

Remove the cover from the isolation cart, if necessary, and set up the work area. Check the cart or anteroom *to make sure an adequate amount of the proper supplies are available for the designated transmission-based precautions category.*

Implementation

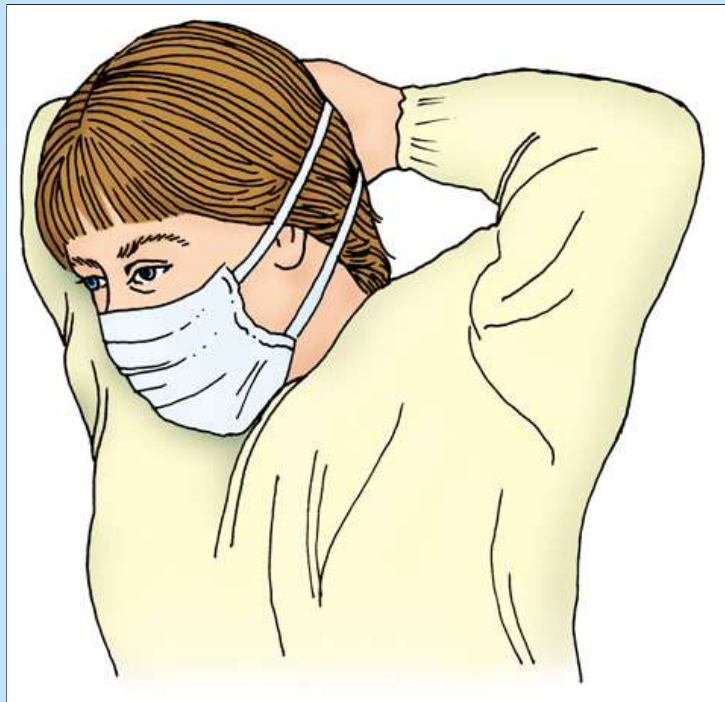
- Remove your watch (or push it well up on your arm) and rings, if required by your facility. *These actions help prevent the spread of microorganisms that may be hidden under these adornments.*
- Perform hand hygiene.^{7 8 9 10 11 12}
- Pick up the fluid-resistant gown and allow it to unfold in front of you without touching areas of your body that may be contaminated *to minimize the transmission of microorganisms.* 
- Put on the gown and wrap it around the back of your uniform, making sure it overlaps and completely covers your uniform *to prevent contact with the patient and the patient's environment.*^{3 5} Tie the strings or fasten the snaps or pressure-sensitive tabs at the neck. Then tie the waist strings.
- Place the mask snugly over your nose and mouth and below your chin.¹³ Secure the ear loops around your ears or tie the strings at the middle of the back of your head and neck *so that the mask won't slip off.* If the mask has a metal nose strip, squeeze it to fit your nose firmly but comfortably.^{3 5} (See [Putting on a face mask.](#)) If you wear eyeglasses, tuck the upper edge of the mask under the lower edge of the glasses *to minimize the likelihood of clouding your glasses.* 



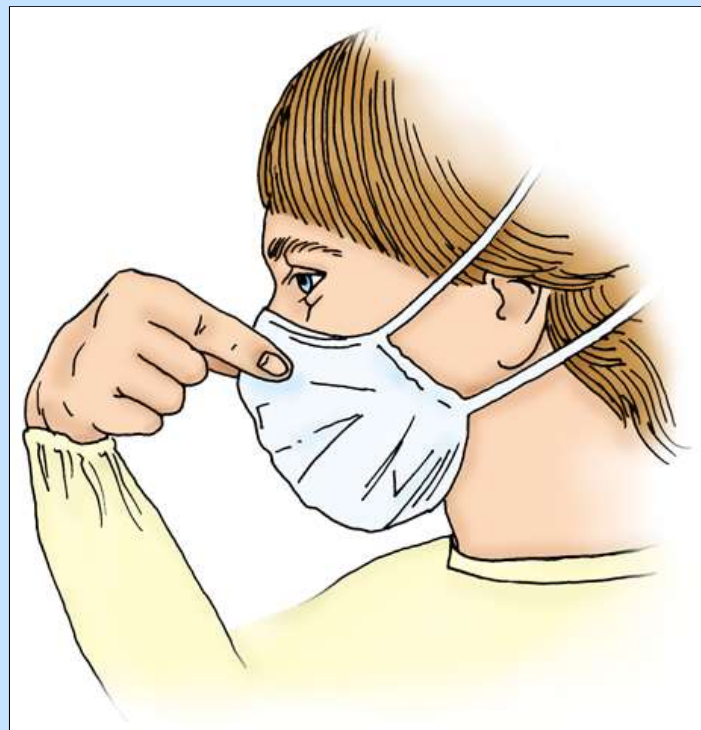
EQUIPMENT


PUTTING ON A FACE MASK


Put on a face mask *to avoid exposure to infectious agents and potentially infectious blood or body fluids.*⁵ Position the mask to cover your nose and mouth, and secure it high enough to ensure stability. Tie the top strings at the back of your head above the ears. Then tie the bottom strings at the base of your neck, as shown below. Alternatively, if the face mask has ear loops, secure them around your ears.^{3 6}



Adjust the metal nose strip if the mask has one, as shown below.^{3 6}



- Choose eye protection according to your risk of exposure. Although goggles provide eye protection, they don't protect the rest of the face from splashing of potentially infectious substances. Wear a face shield for any procedures that may involve spraying or splashing of respiratory secretions or other body fluids.^{3 5 6} 

- Select gloves according to your hand size *to make sure they fit securely*. Put on the gloves and pull them over the cuffs of your gown *to cover the edges of the gown's sleeves*.¹³ 

■ Special Considerations

- If you require airborne precautions, wear an N95 or higher level particulate respirator approved by the Occupational Safety and Health Administration, rather than a surgical mask.^{3 5 14} (See the "[Airborne precautions](#)" procedure.) Employees who wear respirators must undergo proper fit-testing initially and then periodically thereafter, according to federal, state, and local regulations.^{15 16}
- If your respirator device is reusable, retain it for further personal use unless it's contaminated or damaged or it fails to form a good seal.¹⁶ Store it as directed by your facility. Reuse of respiratory protection may consist of removing and putting on the device again between patient encounters. *To avoid a transmission risk*, adhere to stringent hand hygiene before and after handling the respiratory protection device.¹⁶
- Always perform hand hygiene before putting on gloves *to avoid contaminating the gloves with microorganisms from your hands*.^{7 8 9 10 11}
- Use gloves only once.^{3 5} If a glove tears, remove it, perform hand hygiene, and put on a new pair of gloves.⁶
- Be aware that personal protective equipment loses its effectiveness when wet *because moisture permits organisms to seep through the material*. Change masks and gowns as soon as moisture is noticeable or according to the manufacturer's recommendations or your facility's guidelines.^{3 5 17}
- Keep personal protective equipment and other isolation precaution supplies stocked *so they're readily available for those who must enter the patient's room*.

■ Documentation

None needed.

This procedure has been reviewed by the Academy of Medical-Surgical Nurses.



■ Related Procedures

- [Hazardous drug preparation and handling](#)
- [Hazardous drug spill management](#)
- [Personal protective equipment \(PPE\), putting on, ambulatory care](#)
- [Personal protective equipment \(PPE\), removal](#)
- [Personal protective equipment \(PPE\), removal, ambulatory care](#)

■ Related Lexicomp and UpToDate Patient Teaching Handouts

- [Protective Helmet](#)

■ References

[\(Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions\)](#)

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■ Additional References

- World Health Organization. (2009). "Glove use information leaflet" [Online]. Accessed April 2019 via the Web at https://www.who.int/gpsc/5may/Glove_Use_Information_Leaflet.pdf (Level VII)

Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions

The following leveling system is from *Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice* (2nd ed.) by Bernadette Mazurek Melnyk and Ellen Fineout-Overholt.

Level I: Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from well-designed RCTs

Level III: Evidence obtained from well-designed controlled trials without randomization

Level IV: Evidence from well-designed case-control and cohort studies

Level V: Evidence from systematic reviews of descriptive and qualitative studies

Level VI: Evidence from single descriptive or qualitative studies

Level VII: Evidence from the opinion of authorities and/or reports of expert committees

Modified from Guyatt, G. & Rennie, D. (2002). Users' Guides to the Medical Literature. Chicago, IL: American Medical Association; Harris, R.P., Helfand, M., Woolf, S.H., Lohr, K.N., Mulrow, C.D., Teutsch, S.M., et al. (2001). Current Methods of the U.S. Preventive Services Task Force: A Review of the Process. American Journal of Preventive Medicine, 20, 21-35.