

Donning and Doffing PPE with a Filtering Facepiece Respirator (FFR)/N95 Respirator

Time Estimate: 10 minutes when the script is read at a reasonable pace. 13 to 15 with graphics/pauses.

Narrated Text	Graphics
Some donning and doffing of PPE in BSL-3 laboratories is site-specific. You should always refer to the SOPs for the BSL-3 laboratory you are working in.	<i>The graphics for this video will be live action of a person taking the actions narrated in the audio.</i>
Donning should take place in the anteroom or designated gowning area outside the main laboratory space. This area serves as a controlled environment where personnel can put on the required PPE, including gloves and respiratory protection, before entering the lab.	
Donning in the anteroom helps prevent the contamination of clean areas and ensures that all necessary protective measures are in place before exposure to potentially hazardous agents within the BSL-3 laboratory.	
First, to prevent contamination, wash hands thoroughly before putting on any PPE. Tie back long hair, remove rings and watches, and move cell phones to a designated area, such as a locker.	
Inspect your PPE for integrity, size, and condition. Check for tears, gaps, holes, or any other damage. Make sure everything is clean, disinfected if reusable PPE, and intact. If anything is compromised, replace it.	
PPE should be donned in a specific sequence to ensure maximum protection. • Shoe covers or dedicated laboratory footwear • Inner layer gloves	

Narrated Text	Graphics
• Gown or coverall • Respiratory protection • Face shield or safety eyewear • Outer layer gloves	
The following is general guidance for donning and doffing PPE when you are using a Filtering Facepiece Respirator, or N95 respirator.	
As described, you should begin with foot protection. To don shoe covers or booties, ensure you have a clean and appropriate surface to sit or stand on.	
In donning the first shoe cover: • Sit on a chair or stand with support. • Hold the shoe cover with both hands, ensuring the opening is fully stretched. • Place one foot into the cover, making sure your shoe is completely enclosed. • Secure the shoe cover around your ankle or calf, depending on the design.	
To don the second shoe cover • Balance on the foot that already has a cover or hold onto a stable and suitable support. Repeat the same process with the second shoe cover.	
With any footwear, make sure it fits securely and comfortably to prevent tripping or slipping hazards.	

Narrated Text	Graphics
Fasten any ties, straps, or elastic bands, if present, to ensure the footwear is snug and will not come off during laboratory activities. Ensure that the footwear fully covers the foot and extends up to cover the ankles if required, providing a continuous barrier.	
Next, put on your first pair of gloves – the inner gloves – ensuring a snug fit without any tears or defects. In some situations, extend the gloves over the cuff of the coat.	
Next, you'll put on your gown or coverall. Fasten all closures such as zippers, snaps, or Velcro™ to secure the gown or coverall snugly. Make sure you have sufficient range of motion. Tuck the gown or coverall into gloves and footwear to create a continuous barrier. Your knit cuffs should be clean if gloves are pulled over them.	
Now you will don your FFR (N95 Respirator). Using one hand, place the N95 respirator over your nose, mouth, and chin with the nosepiece at your fingertips, allowing the straps to hang freely. The nosepiece should span and cover the bridge of your nose, and the respirator should cup your chin. Pull the bottom strap over your head and position it around your neck and below your ears.	
Then, pull the top strap over your head, resting it high at the back of the head and make sure it is over the top, back, and around the crown of your head and above	

Narrated Text	Graphics
your ears. Check that the straps are not twisted or crossed.	
Next, using the fingers of both hands, you should mold the nosepiece to fit over the bridge of your nose. Do this by pushing inward while moving your fingertips down along both sides of the nosepiece.	
At this point, follow the manufacturer's user seal check instructions to conduct a user seal check. Place both hands over your N95 respirator, exhale, then inhale to create both positive and negative pressures inside the facepiece.	
If the facepiece bulges out slightly then collapses inward slightly and no air leaks are detected between your face, nose, and the respirator, that indicates your respirator fits properly. If, on the other hand, you detect air leakage at the mask edges or your nose, reposition it and readjust the straps for a more secure seal. Then recheck. If you cannot achieve a proper seal, the respirator may not fit your face properly and you are not protected and thus should not enter a hazardous area.	
If your N95 respirator model has an exhalation valve and it is difficult to do a positive exhalation seal check, just do the negative inhalation seal check. If at any time you have any questions or concerns, see your supervisor and contact the safety office and Respirator Protection Program.	
Next, put on your safety glasses. Adjust the headbands or straps to ensure a snug and secure fit, making sure the glasses sit comfortably without gaps.	

Narrated Text	Graphics
Confirm that the safety glasses cover the entire eye area and that eye protection is compatible with your N95 respirator without causing discomfort.	
Last, put on the second pair of gloves – the outer gloves – over the inner gloves. Ensure they fit well and cover the cuffs of the gown or coverall. Note that nitrile gloves as the base layer and then latex as the second layer is easier to don than when both pairs of gloves are made of latex. Some nitrile gloves will don smoothly over nitrile gloves, but not always. Once donned, re-check both pairs of gloves for any holes, tears, or imperfections to ensure full protection.	
Make sure all PPE is adjusted properly before beginning laboratory work.	
When you are ready to doff your PPE and exit the lab, make sure you are in a designated area, typically a controlled environment such as a decontamination room or anteroom. This is to contain any potential contaminants. Before and during removal, inspect PPE for visible contamination or damage. If contamination is present, take extra precautions to avoid spreading it.	
PPE should be removed in order of most potentially contaminated to least, generally following this sequence: • Footwear • Outer gloves • Gown or coverall • Face shield or safety eyewear • Respiratory protection	

Narrated Text	Graphics
• Inner gloves PPE should be removed slowly and deliberately to avoid generating aerosols or causing contaminants to become airborne.	
Start with footwear. Doffing footwear involves a “bootie dance.” You must be in a designated area for doffing, often near the exit of the contaminated zone.	
Doff the first shoe cover. • Sit on a chair or stand with support. • Use one hand to grab the back of the shoe cover at the heel. • Carefully and slowly peel the cover off, turning it inside out as you remove it. Slow and careful movements help to avoid generating aerosols or spreading contaminants. Avoid touching the outside of the cover with your hands or allowing your skin or clothes to have contact with the contaminated surface of the shoe covers.	
Doff the second shoe cover. Balance on the uncovered foot or hold onto a support. Repeat the same process with the second shoe cover.	
The “bootie dance” emphasizes the importance of eliminating contamination by employing balance, being careful not to contaminate yourself or the surrounding environment and following the correct sequence to minimize the risk of spreading contaminants.	

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Place disposable footwear directly into designated biohazard containers for disposal. For reusable footwear, inspect for contamination and place them in a designated area.	
Next, you'll remove your outer gloves. Visually inspect the outer gloves for any contamination or damage before removal. Pinch the outside of one glove at the wrist without touching your skin. Pull the glove away from your hand, turning it inside out as you remove it.	
Hold the removed glove in the gloved hand. Slide the fingers of your ungloved hand under the wrist of the remaining glove, being careful not to touch the outside of the glove. Peel the second glove off over the first glove, ensuring both gloves are turned inside out. Dispose of the gloves properly in a biohazard waste container.	
At this point, since your inner gloves are still on, you should perform a decontamination wipe-down, especially of all surfaces that will be touched, like the sleeves of the gown and the face shield, before full doffing.	
When doffing your gown or coverall, carefully unfasten all closures. Take care not to touch anything underneath the outer layer. Remove your gown or coverall slowly. Use the "inversion" method. This means carefully removing it without touching the contaminated exterior, turning it inside out as it is removed.	

Narrated Text	Graphics
This ensures that any pathogens or hazardous materials on the outside are contained within the gown, minimizing the potential for accidental exposure or environmental contamination during disposal.	
Ball the gown up tightly to further reduce the risk of spreading contaminants and make it easier to handle and dispose of safely. Dispose of the gown or coverall in designated biohazard containers immediately after removal.	
Next, remove your face shield or eyewear carefully and gently to avoid splashing or generating aerosols. Do not touch the front surface of the eyewear or face wear, as it may be contaminated. Instead, handle by the straps, temple pieces, or sides. If the eye and face protection is disposable, place it directly into a designated biohazard container. If it is reusable, place it in a designated decontamination area.	
Next, you'll remove your respirator. When doffing a filtering facepiece respirator, do <i>not</i> touch the front of the respirator; consider it contaminated. Remove the FFR using only the straps. 1. Lift the bottom strap over your head. 2. Remove the top strap in the same way. Lift the FFR away from your face with the top strap and discard it into the designated waste receptacle.	

Narrated Text	Graphics
The last step is to remove inner gloves. Before proceeding, ensure the inner gloves are not visibly contaminated. Then, use a similar pinch and pull technique as with the outer gloves. Pinch the glove at the wrist of one hand without touching your skin. Pull the glove away from your hand, turning it inside out.	
Hold the removed glove in the gloved hand. Slide the fingers of your ungloved hand under the wrist of the remaining glove, being careful not to touch the outside. Peel the second glove off over the first glove, turning both gloves inside out. Dispose of the inner gloves in a biohazard waste container. Do not wash or reuse disposable gloves.	
Perform a thorough hand wash after completely removing all PPE to ensure any residual contamination is eliminated. Handwashing stations are designed to ensure the thorough cleaning and decontamination of hands that may have come in contact with hazardous biological agents.	
Handwashing stations are touchless with features like foot pedals or sensors to minimize direct contact and prevent contamination. They are intentionally located near exits of the laboratory, so personnel can wash their hands immediately before leaving the containment area. Often, these stations are equipped with specific disinfectants effective against the pathogens handled in the laboratory.	