

# Lesson Plan - Practical Exercise

**Drill: #**

**Title:** Best Practices for Reducing Exposure to Fireground Contaminants

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**Objectives:** Removing PPE and skin decontamination using wipes.

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<b>Duration</b>	1 Hour
<b>Instructor / Student Ratio</b>	1/5
<b>Resources Needed</b>	Full PPE, SCBA, Open area to accommodate donning/doffing of PPE
<b>Instructors:</b>	Instructional Materials, wipes, nitrile gloves
<b>Students:</b>	Full structural firefighting PPE, SCBA
<b>Introduction</b>	Firefighters face risks of contamination and exposure in their daily operations. There is a lot of great working going on right now focusing on contamination control. PPE manufactures are designing new gear and equipment while researchers are determining how and when to clean the gear. These steps for properly doffing PPE and utilizing wipes can immediately reduce skin exposure to the contaminants on the gear. However, washing hands and showering should be done as soon as possible.
<b>Safety Notes</b>	Ensure adequate space for donning/doffing of PPE and SCBA.  Hydration needs of the students.  Ensure that students wear proper PPE.  Watch slips/falls when donning/doffing PPE.

<p><b>Demonstrate the Task</b></p>	<p>The Instructor will talk the students through the operation and emphasize the learning points.</p>
<p><b><u>Instructor Notes</u></b></p> <p><b>When the firefighter is done working.</b></p>	<p><b><u>Main Steps</u></b></p> <ol style="list-style-type: none"> <li>1. Remain “on-air”</li> <li>2. Perform gross on-scene decontamination.</li> <li>3. Remove gloves.       <ol style="list-style-type: none"> <li>a. Have EMS/engineer/other with nitrile gloves on, remove them for you.</li> <li>b. Use the hygienic method to remove them (without touching exterior with bare skin, similar to removing EMS gloves)</li> </ol> </li> <li>4. Remove thumb-loop (if present)</li> <li>5. Don nitrile gloves</li> <li>6. Remove helmet</li> <li>7. Remove air-pack using coat method while remaining on-air</li> <li>8. Doff bunker coat without touching exterior of bunker coat shell</li> <li>9. Grab exterior of the hood and pull up over head</li> <li>10. Holding exterior of mask, remove mask and hood together</li> <li>11. Turn off air (donning switch, disconnect regulator, or similar)</li> <li>12. Loosen bunker pants (loosen straps, undo fly)</li> <li>13. Doff bunker pants by grabbing the top-exterior and pulling/pushing down to boots</li> <li>14. Remove boots/bunker pants by stepping out of boots and into clean footwear</li> <li>15. Remove and discard nitrile gloves</li> <li>16. Use cleaning wipe(s) to clean back of hand, between fingers, and palm</li> <li>17. Discard wipe(s)</li> <li>18. Use new cleaning wipe(s) to clean neck and collar.</li> <li>19. Discard wipe(s)</li> <li>20. Use new cleaning wipe(s) to clean face, forehead, jawline, and ears.</li> <li>21. Discard wipe(s)</li> <li>22. Use new cleaning wipe(s) to clean top of head/hair.</li> <li>23. Discard wipe(s)</li> </ol>

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**When the firefighter goes into rehab—then back in to resume work.**

1. Remain “on-air”
2. Remove gloves
  - a. Have EMS/engineer/other with nitrile gloves remove them for you
  - b. Use the hygienic method to remove them (without touching exterior with bare skin, similar to EMS gloves)
3. Remove thumb-loop (if present)
4. Don nitrile gloves
5. Remove helmet
6. Remove air-pack using coat method while remaining on-air.
7. Doff bunker coat without touching exterior of bunker coat shell.
8. Grab exterior of the hood and pull up over head.
9. Holding exterior of mask, remove mask and hood together
10. Turn off air (donning switch, disconnect regulator, or similar)
11. Loosen bunker pants (loosen straps, undo fly)
12. Doff bunker pants by grabbing the top-exterior and pulling/pushing down to boots
13. Remove and discard nitrile gloves
14. Use cleaning wipe(s) to clean back of hand, between fingers, and palm.
15. Discard wipe(s)
16. Use new cleaning wipe(s) to clean neck and collar.
17. Discard wipe(s)
18. Use new cleaning wipe(s) to clean face, forehead, jawline, and ears.
19. Discard wipe(s)
20. Use new cleaning wipe(s) to clean top of head/hear.
21. Discard wipe(s)
22. Rehab
23. Rehab over—don clean hood
24. Don clean nitrile gloves
25. Don bunker pants, bunker coat, SCBA, and helmet
26. Remove and discard nitrile gloves
27. Don firefighting gloves
28. Go “on-air” and resume work

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## References

- NFPA 1500 14.5.3.1
- Fent, K.W., Evans, D.E., Babik, K., Striley, C., Bertke, S., Kerber, S., Smith, D., Horn, G.P. (2018). **Airborne contaminants during controlled residential fires**, *Journal of Occupational and Environmental Hygiene*, **15**(5):399-412
- Horn, G. P., Kerber, S., Fent, K. W., Fernhall, B., & Smith, D. L. (2016). **Cardiovascular and Chemical Exposure Risks in Modern Firefighting**, *Illinois Fire Service Institute*
- IFSI Fireground Exposure Control Videos
  - <https://www.youtube.com/watch?v=QyAt5WHf5uM>
  - <https://www.youtube.com/watch?v=9uYp0ZQP158&t>