

## Personal Protective Equipment Preservation and N95 Respirator Decontamination and Reuse Webinar Q&A

Respirators such as N95 require fit testing. How does decontamination impact the quality of the fit test? Is there applicable guidance?

- CDC/NIOSH/NPPTL has collected on-going testing of various N95 disposable respirators after decontamination using Vaporous Hydrogen Peroxide, Chlorine Dioxide, etc. (<https://www.cdc.gov/niosh/npptl/respirators/testing/DeconResults.html>)
  - The NPPTL used a Manikin Fit Fact (mFF), defined as the “expression related to the amount of leakage measured through the face or neck seal of a respirator mounted to a manikin under specified airflow and environmental conditions.”
  - On the website, for the Vaporous Hydrogen Peroxide (VPHP), the 3M models tested (1860, 160X, 8210, V-Flex 1804) showed  $\geq 100$  mFF after 5 decon cycles through VPHP.
  - You can go through the website on the models used and type (and iteration) of decon cycles tested.
  - Each EUA issue by the FDA has decon cyclic limitations that are specific to the device used -<https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization#covidppe>

Regarding the half mask/face piece respirators, Mr. Koerner said they could go a year. Has there been any evidence to show that?

- The specified reusable respirator manufacturer has recommendations on changeout schedules for filter cartridges.
- The filter cartridge changeout up to a year was cited from a couple of healthcare facilities as their operating practice given that the respirators are used in a very clean setting (e.g., healthcare facility) and only used if doing patient encounters with infectious diseases. So, the usage requirement is not necessarily daily, but as needed.
- EHMR are designed to be reused multiple times and the facepiece can last years if well maintained. Filter change out schedules will vary based on breathing resistance of the user and any fouling or visible contamination (this will require immediate replacement of the filter). 3 months to one year are the change out schedules we have ascertained from manufacturers and user organizations.

Is UVC light disinfecting practices supported by or recommended by this group?

- Currently, there are no FDA EUA issued for UVC disinfection of disposable respirators.
- However, per the <https://www.cdc.gov/niosh/npptl/respirators/testing/DeconResults.html> as well as CDC guidance on optimization, studies have shown that potential use of UVC in disinfecting disposable filtering facepiece respirators. The increased energy, however, has shown material degradation so further studies are needed on the appropriate energy levels, and numbers of decon cycles to still maintain effective respirator fit and protection in addition to microbial disinfection.

How many times can you send out an N95 mask or a SCBA Mask for the fire service? Can we use the same fit test?

- The same fit test methods, spelled out in 29 CFR 1910.134, Appendix A, apply to both N95 and tight-fitting SCBA masks.
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If a fire district creates a UVC Disinfecting Cabinet (placing a UVC light within a cabinet, provide procedures) would this be an acceptable means to properly decon respirators?

- It is very difficult to say whether this is effective or not without testing the energy level, the microbial disinfection level, and respirator integrity after disinfection.
- Additionally, you can refer to your local OSHA office and inquire as to the acceptability of this practice in the context of a Respiratory Protection Program.

When do you determine if the N95 is damaged, not visibly soiled, but the material is getting soft would you still decon it for re-use?

- Under healthcare settings, the FDA Emergency Use Authorization specifies the maximum number of decontamination cycles authorized for a given product receiving the EUA.
- Soiling or contamination with bodily fluids will render an N95 respirator as not qualified for decontamination under FDA EUA and must be disposed of.
- You really cannot tell whether or not the material “softness” is a good indicator for the appropriate number of decon cycles, although if straps degrade to the point where the FFR does not give a tight fit, they should be discarded..

What do you recommend firefighters wear on medical calls - structural firefighting gear - gowns - long sleeve shirts?

- The current organization’s protocols for responding to medical calls apply, but with COVID-19, CDC guidelines describe the recommended PPE (<https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html>).

If the same person is wearing N 95 masks on a daily basis in the healthcare setting, how many times can they wear it before sending it in for decon?

- Healthcare personnel should follow their organization’s procedures, but typically, N95 respirators are designed for single use. So, if healthcare personnel and facilities are implementing crisis capacity strategies due to critical shortages of new N95 respirators, these personnel and the organization can decontaminate and reuse N95 respirators after single-use.