

Personal Protective Equipment Re-Use Recommendations - N95 Respirators

In CMU laboratories, the primary purpose of N95 respirator use is to reduce worker exposure to animal allergens in the vivarium. Given that the animal allergens are particulate in nature and will be captured by the N95 respirator during normal use, there is no way to remove those allergens from the filtration media. Storing the N95 for re-use may allow the allergens to contaminate the inside of the N95, there-by exposing the wearer to the allergens when the respirator is donned. Re-use of N95 respirators in animal care areas is not an approved option at CMU currently.

To conserve the supply of N95 respirators, the following suggestions should be implemented:

- Use alternatives to N95 respirators (e.g., half-mask or full facepiece air purifying respirators with P100 cartridges, powered air purifying respirators PAPR) where feasible.
- Schedule workers who do not require respiratory protection to perform animal care duties, minimizing the number of individuals using N95 respirators.
- Group work tasks requiring the use of personal protective equipment (PPE) to minimize the need for changing PPE and the amount of PPE used.
- Stagger work shifts to minimize employee contact with each other and ensure proper social distancing is maintained.
- Contact the Office of Laboratory and Field Safety to have current N95 users evaluated for half-mask or full facepiece respirator fit testing.

With respect to decontamination and re-use of respirators for human pathogenic organisms, including COVID-19, [official guidance from the Centers for Disease Control \(CDC\)](#) supports limited re-use of N95 respirators in healthcare settings, but **does not** indicate an approved decontamination method for N95 respirators. Additional organizations researched for guidance and recommendations include the World Health Organization (WHO), US Food and Drug Administration (FDA) and the National Institute for Occupational Safety and Health (NIOSH). None of these organizations currently recommend re-use of N95 respirators. Studies are underway to determine the efficacy of disinfecting N95 respirators after use by hydrogen peroxide vapor decontamination, ultraviolet germicidal irradiation, low temperature heating, microwave generated steam, microwave steam bags, moist heat incubation, liquid hydrogen peroxide, and ethylene oxide; however, none are approved for implementation by the researched organizations. Autoclaving or using disinfectant wipes on N95 respirators has been found to alter N95 respirator performance, and is currently not recommended. The Office of Laboratory and Field Safety will routinely monitor the references cited for current recommendations and update this page accordingly.

NOTE: Initial fit testing is still required to ensure the respirator is capable of providing the expected level of protection to the worker. In order to conserve N95 resources, OSHA has allowed employers to suspend the annual fit testing requirements for current N95 users in a healthcare setting, as long as the user seal check (i.e., a fit check) is performed at each donning to make sure they are getting an adequate seal from their respirator. Workers must inform their supervisor if the integrity and/or fit of their N95 filtering facepiece respirator is compromised. Contact the Office of Laboratory and Field Safety with questions regarding annual fit testing.

Resources:

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/decontamination-reuse-respirators.html>

<https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html>

<https://www.cdc.gov/niosh/index.htm>

<https://www.osha.gov/memos/2020-04-03/enforcement-guidance-respiratory-protection-and-n95-shortage-due-coronavirus>

<https://www.fda.gov/media/136386/download>

[https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak)