

# Filtering out Confusion: Frequently Asked Questions about Respiratory Protection

## Respirator Reuse and Extended Use

Nationwide, approximately 1.3 million workplaces provide at least a portion of their employees with respiratory protection. One of the most common types of respiratory protection is the filtering facepiece respirator (FFR), which is designed to be discarded when it becomes unsuitable for further use due to considerations of hygiene, excessive resistance, or physical damage. However, due to the considerations of cost, convenience, and supply, respiratory protection program managers have great interest in the practices of reuse and extended use of National Institute for Occupational Safety and Health (NIOSH)-approved FFRs that are not damaged or soiled. The following are a few of the most frequently asked questions about respirator reuse.



## Can Filtering Facepiece Respirators Safely be Reused?

Yes, in certain situations. **Reuse** refers to the practice of using the same respirator multiple times during a work shift. The respirator is stored between uses and put on (donned) again prior to the next potential exposure.

In most workplace situations, an FFR can be reused as part of an employer's respiratory protection program. Safe FFR reuse is affected by a number of variables that impact respirator function and contamination over time.<sup>1, 2</sup> Unless the respirator manufacturer identifies a specified duration of use, for example "single use only", or the employer's respiratory protection program excludes reuse, users can wear an FFR until it is damaged, soiled, or causing noticeably increased breathing resistance.

FFRs should only be reused by the same wearer and should be stored in the following ways:

- According to manufacturer's recommendations;
- In a way that protects them from damage, dust, contamination, sunlight, extreme temperatures, excessive moisture, damaging chemicals, and;
- In a way that prevents deformation of the facepiece, straps, and exhalation valve, if present.

Regardless of the setting, the number of times an FFR is reused should be limited. There is no way of determining the maximum possible number of safe respirator reuses as a generic number to be applied in all cases.



## When Should Employees not Reuse their Filtering Facepiece Respirators?

While limited FFR reuse is practiced safely in many workplaces, extra caution should be taken in workplaces where there are additional risks posed by handling a potentially contaminated respirator.



For example, FFRs **should not** be reused in biosafety and animal biosafety levels 2 and 3 laboratories.<sup>3</sup> Pathogens can remain on the respirator surface for extended periods of time and can potentially be transferred by touch to the wearer's hands and thus risk causing infection through subsequent touching of the mucous membranes of the face (i.e., self-inoculation). Similar to other personal protective equipment (PPE) used in these environments, such as gloves, FFRs should be discarded after each use and disposed of with other contaminated laboratory waste. There are also additional considerations when implementing FFR reuse in a healthcare setting. To learn more, see the [Recommended Guidance for Extended Use and Limited Reuse of N95 Filtering Facepiece Respirators in Healthcare Settings](#) as well as the [Hospital Respiratory Protection Program Toolkit](#).

## How Long can Employees Wear the Same Filtering Facepiece Respirator?

**Extended use** refers to the practice of wearing the same respirator for repeated exposures, without removing (doffing) the respirator. Continuous or extended FFR use of several hours or more is common in many industries. In general, an employee can safely wear the same FFR until it is damaged, soiled, or causing noticeably increased breathing resistance.

The maximum length of continuous use in non-dusty workplaces is typically dictated by hygienic concerns (e.g., the respirator was discarded because it became contaminated), or practical considerations that call for automatic removal and break in wearing the respirator (e.g., need to use the restroom, meal breaks, etc.), rather than a pre-determined number of hours.

However, for dusty workplaces that could result in high filter loading (e.g., 200 mg of material captured by the filter), service time for N-series filters (such as the commonly-used N95) should be limited to 8 hours of use (continuous or intermittent).<sup>4</sup> Extensions should only be granted by performing an evaluation in specific workplace settings that: (a) demonstrates extended use will not degrade the filter efficiency below the efficiency level specified in [42 CFR Part 84](#), or (b) demonstrates the total mass loading of the filter(s) is less than 200 mg.



The key consideration for safe extended use is that the respirator **must** maintain its fit and function.

## Where can I Find More Information?

This information and more is available on the [NIOSH Respirator Trusted-Source webpage](#).

### References

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4. NIOSH [1996]. Guide to the selection and use of particulate respirators. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 96-101, <https://www.cdc.gov/niosh/docs/96-101/default.html>

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