

Respiratory Protection in Healthcare: Fit Testing

This quick reference guide is intended to help healthcare respiratory protection program administrators better understand fit testing and address some frequently asked questions such as ways to maximize efficiency of large-scale fit testing operations.

Tight fitting respirators, such as standard N95 respirators and surgical N95 respirators, are designed to help reduce the wearer's exposure to airborne particulate hazards they may inhale including both bioaerosols (e.g. bacteria and viruses) and nonbiological aerosols. Tight fitting respirators are designed to form a seal with the wearer's face, so that air passes through the filter (instead of around the edges) before it is inhaled. In the United States, selection and use of respirators is governed by the Occupational Safety and Health Administration (OSHA). OSHA has a respiratory protection standard (29 CFR 1910.134) that specifies the requirements for employers assigning respiratory protection to workers. Those requirements include medical evaluations and fit testing - among other requirements. A medical evaluation is required to assess the employees and determine the employee's ability to use the respirator. Respirator use may place a physiological burden on an employee that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee. A medical evaluation must be conducted by a physician or other licensed health care professional before fit testing or using the respirator. This evaluation can be done in two ways, either by using a mandatory medical questionnaire that appears in Appendix C of the OSHA respiratory protection standard or by performing an initial medical exam that will obtain the same information. Nurse practitioners, physician assistants, occupational health nurses or other licensed health care professional may evaluate the employee's medical ability to use a respirator if they are authorized to do so by state license, certification, or registration.

Another important element for use of tight-fitting respirators is fit testing. A properly conducted fit test helps to verify that the selected respirator can achieve an acceptable fit on an individual wearer's face. It must be conducted at least annually and if the wearer's face changes in a way that could impact the respirator's ability to fit adequately. OSHA specifies the fit test methods allowed and the procedures that need to be followed for each method. OSHA-accepted methods include qualitative fit testing (QLFT) and quantitative fit testing (QNFT) options. QLFT methods are commonly used and rely on a taste, smell or irritation from the test agent. 3M has two QLFT options - FT-10 (sweet) and 3M FT-30 (bitter) QLFT fit test kits. These kits are suitable for fit testing particulate respirators including standard N95 respirators and surgical N95 respirators. OSHA does not require any specific certification for fit testers. The individual administering a QLFT for example, must be able to prepare test solutions, calibrate equipment, perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order.

This document has an associated video. Click the link below to access the video.

Watch the short educational video below for additional information on fit testing N95 respirators.

[Respiratory Protection in Healthcare: Fit Testing Employees and Respiratory Protection](#)

Additional 3M Resources

Description	Link
Quick Reference Guide: Qualitative Fit Testing (OSHA)	https://multimedia.3m.com/mws/media/1658130O/quick-reference-guidequalitative-fit-testing.pdf
Quick Reference Guide: Qualitative Fit Testing (UK)	https://multimedia.3m.com/mws/media/8114730/3m-qualitative-fit-testing-poster.pdf?fn=Qualitative%20Fit%20Testing%20Guide%20Po
Fit Testing Video	https://multimedia.3m.com/mws/media/992396O/3m-fit-test-kit-training-video.mp4
Fit Testing Video: Healthcare	https://multimedia.3m.com/mws/media/1093682O/3m-health-care-particulate-respirator-surgical-mask-fit-test-instructions.mp4
Fit Testing FAQ	https://multimedia.3m.com/mws/media/973364O/3m-respirator-fit-testing-frequently-asked-questions-faq.pdf?fn=TDB%20228%20-%20Fit%20Test%20FAQs.pdf
Quantitative Fit Testing of Respirators	https://multimedia.3m.com/mws/media/1282559O/quantitative-fit-testing-of-respirators-technical-bulletin.pdf

Other Available Resources

- [Hospital Respiratory Protection Program Toolkit](#) – joint effort of U.S. OSHA, U.S. Centers for Disease Control and Prevention (CDC), and U.S. National Institute for Occupational Safety and Health (NIOSH)

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2. Open your Google Chrome browser. Click this [link](#) if you need to download Google Chrome. NOTE: You will not be able to download the videos using Microsoft Edge.
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