Tips for Meeting OSHA Fit Test Requirements in Skilled Nursing Facilities

The effective use of N95 filtering facepiece respirators (FFR) in skilled nursing facilities is essential for reducing the risk of respiratory illnesses such as influenza or COVID-19. The Occupational Safety and Health Administration (OSHA) mandates the proper use of N95 FFRs through its Respiratory Protection Standard (29 CFR 1910.134).[1] The Respiratory Protection Standard extends to all long term care facilities and includes additional requirements such as medical evaluations, fit testing, ongoing training, and periodic evaluations. Compliance with these standards helps mitigate health risks for staff and maintain a safe working environment.

CMS requires nursing facilities Infection Prevention and Control Practices (IPCP) to follow national standards under Ftag 880. The OSHA requirements are considered national standards, and thus must be met under CMS regulatory requirements. This guide provides an overview of fit testing process and requirements. However, the information here is specific to fit testing and does not cover all requirements of the OSHA Respiratory Protection Standard. Additional steps must be taken to maintain compliance with the OSHA Respiratory Protection Standard.

To assist providers in meeting the broader OSHA Respiratory Protection Standard, AHCA/NCAL, in collaboration with MCA Consulting, LLC, has developed a comprehensive Respiratory Protection Plan training and toolkit. This all-in-one resource contains everything needed for full compliance with OSHA's Respiratory Protection Standard, including a customizable template plan, essential forms, training videos, and detailed reference guides.

Fit Test Requirements

The OSHA (29 CFR 1910.134)[1] requires respirator users to be fit tested to confirm the respirator forms a tight seal on a staff member's face before using it in the workplace. Fit testing is important to ensure the expected level of protection is provided by minimizing the total amount of contaminant leakage into the facepiece through the face seal.

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TIP: Facilities must be aware of and follow guidelines issued by the CDC regarding N95 FFR, especially during infectious disease outbreaks such as COVID-19.[2]

TIP: Only use a NIOSH certified respirator for protection against air contaminants. Surgical masks and "KN95s" are not respirators.

TIP: Facilities should ensure they have a sufficient number of respirator models and sizes to accommodate staff needs.

Medical Evaluation

A medical evaluation determines staff's ability to wear a respirator. They must complete a medical evaluation before they are fit tested and before using a respirator in the facility.

TIP: Staff need a medical evaluation if they are required to wear a respirator. The OSHA standard (29 CFR 1910.134) requires a medical evaluation as an element of the written RPP.[3,9] The results of the medical evaluation are to be interpreted by a facility designated physician or other licensed healthcare professional.

TIP: Staff may need an additional medical evaluation if they, their supervisor, or respiratory program administrator recognize signs or symptoms that may affect their ability to use the assigned respirator. Additionally, a licensed healthcare professional may determine that staff have a condition that causes them to need another medical evaluation.[3,9]

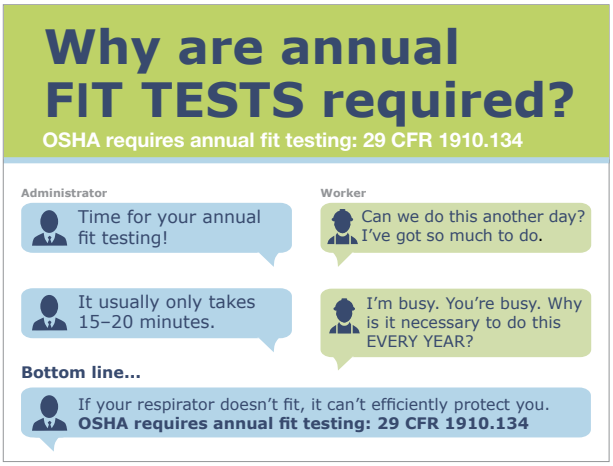
Fit Test Types

A fit test is conducted to verify that a respirator correctly fits the user, provides the wearer with the expected protection, and is comfortable. Fit test methods are classified as either ***qualitative*** or ***quantitative***.[3] Facilities may choose either type of fit testing to perform.

TIP: Ensure adequate time is allowed for fit testing – it typically takes 15-20 minutes per individual.[6] OSHA requires that the wearer be provided adequate time to judge the comfort of an N95 FFR.[1]

Qualitative Fit Test (QLFT): A pass/fail test that relies on the wearer's sensory detection of a test agent. For N95 use, this method involves the use of one of two approved test agents that can be tasted. The first being a saccharin solution aerosol and the other being Bitrex (denatonium benzoate) solution aerosol.

The wearer dons the N95 FFR, and the test agent is introduced in a controlled environment around the FFR's periphery. The wearer performs a series of exercises (e.g., talking, moving head side to side) while inhaling the test agent. A quantitative fit test uses an instrument to numerically measure the effectiveness of the respirator.[3]



Quantitative Fit Test (QNFT): A test that uses an instrument to measure the amount of leakage into the respirator. The wearer dons the N95 FFR, which is then connected to a fit testing instrument. The device measures the concentration of a harmless aerosol inside and outside the FFR while the wearer performs a series of exercises to simulate movements that may affect the FFR's seal.

TIP: Qualitative fit testing is particularly beneficial for initial assessments and environments where quick and straightforward testing is needed. It is recommended to purchase more than one enclosure (hood) from the supplier in case of breakage or limited availability.

User Seal Checks

A user seal check is a procedure conducted every time staff wear a FFR to make sure it is donned properly. The user seal check can be either a positive pressure or negative pressure check.[3,7]

TIP: Once staff have successfully passed a fit test, they should complete a user seal check every time they put on the N95 FFR to ensure an adequate seal is achieved.[1,3]

TIP: To perform a user seal check on a N95 FFR, follow the manufacturer's instructions to perform a user seal check on the specific model you are wearing. This information is available on the box or individual respirator packaging. There are *positive* and *negative* pressure user seal checks, and not every respirator can be checked using both.[3]

TIP: A *positive* pressure user seal check — The person wearing the N95 FFR exhales gently while blocking the paths for air to exit the respirator to make sure there aren't any leaks. A successful check is when slight pressure builds up in the FFR without any leakage.[3]

TIP: A *negative* pressure user seal check — The person wearing the N95 FFR quickly inhales while blocking the paths for air to enter the facepiece. A successful check is when the facepiece collapses slightly under the negative pressure.[3]

TIP: Facial hair also interferes with the seal of an N95 FFR. Facial hair that lies along the sealing area of a respirator, such as beards, sideburns, or some mustaches, will interfere with respirators that rely on a tight facepiece seal to achieve maximum protection. Facial hair is a common reason that someone cannot be fit tested and use a N95 FFR.[4]

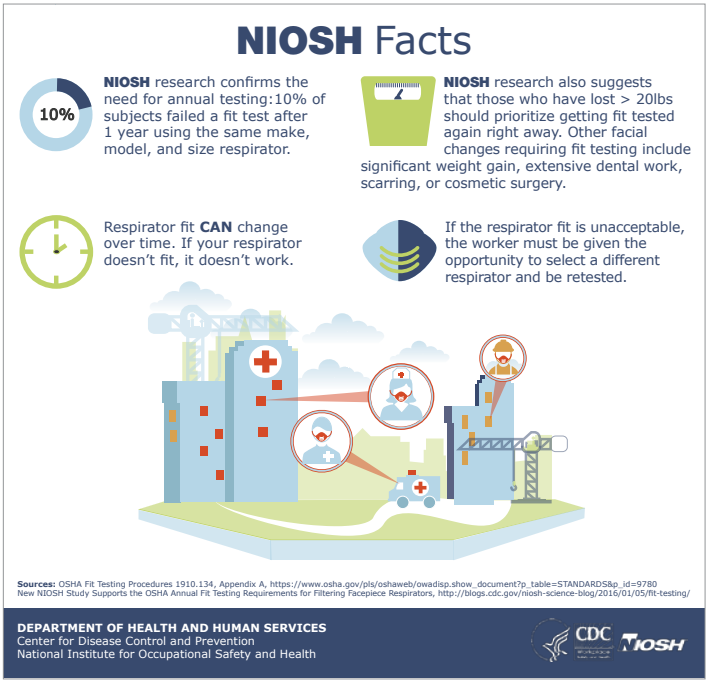
TIP: Glasses or PPE must be worn in a manner that does not interfere with the seal.

Frequency of Fit Testing

OSHA specifies when facilities must conduct fit testing.

TIP: Fit testing should be done on hire, annually, and whenever there is a change in the shape of someone's face. For example, due to scarring, dental changes, cosmetic surgery, or obvious change in weight.[3] Not all people can wear a disposable N95 FFR, and alternatives should be available if respiratory protection is needed.

TIP: A fit test only qualifies staff to use the specific brand/make/model/size of respirator for which they successfully passed a fit test. Respirator sizing varies across different manufacturer brands and models. Therefore, staff should only wear the specific brand, model, and size respirator that they wore during a successful fit test.[3]



Practice Suggestions

Tip: When staff experience skin disruption (e.g., rash, lesions), all those involved in treating the skin condition need to understand the need for the user to wear a respirator and the importance of fit. Alternatives to tight fitting respirators, such as powered air-purifying respirators (PAPR), may need to be considered.[5]

Tip: Assign a dedicated fit test coordinator(s) responsible for overseeing fit testing and training programs. This person should also implement continuous monitoring and provide feedback to staff. The fit testing process serves as an opportunity to review N95 FFR use but does not take the place of formal training that ensures staff understand the proper way to don, doff, and check the fit and seal of their masks.[8]

Tip: Consider implementing a comprehensive, ongoing education, training, and monitoring program as part of the facility's IPCP.[1] This program should include initial education and training sessions for all staff on the importance of N95 FFR, proper donning and doffing procedures, and the necessity of a proper fit and seal.

Tip: Regular refresher courses should be scheduled to keep staff updated on best practices and any new guidelines, such as an annual competency.[1]

Tip: Maintain detailed records of medical clearance, training, and all fit testing(s) for each staff.[1]

TIP: Create and maintain an IPC calendar to schedule performance of fit testing so compliance is maintained.

TIP: For additional information on when and how to use respirators effectively to prevent transmission and protect both staff and residents, refer to the CDC guidelines.

References

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