

N95 and Fit Testing

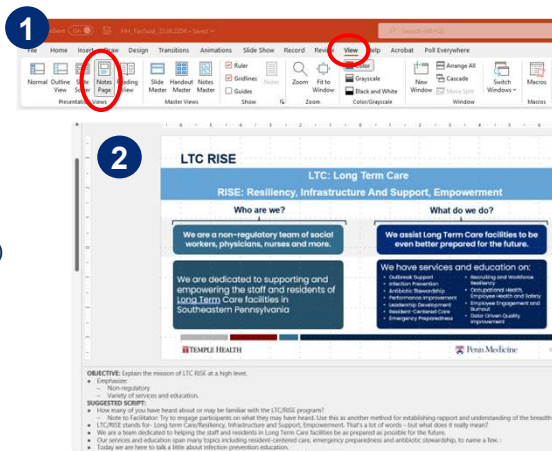
Facilitator Guide



How to Use This Facilitator’s Guide

▶ **Printing out copies is not required.**

- If you can, bring a print out of:
 - Slide 4 (session sign)
- You may want to print out the presentation for your own use. We recommend using Notes View (see picture 1)
- If you can't print anything out – no worries! You can view the notes on your phone or laptop.



▶ Each slide has a guide in the notes section.

- You can see guide at the bottom of slides (see picture 2) or note view
- Each slide has an “Objective”. This is the main point you want to make sure participants understand.
- There are “Facilitator Notes” throughout the Suggested Scripts. These are tips, or question answers for you as facilitator to use.

Before Your Meeting

For Facilitator Use Only

Schedule Presentation

- Confirm a date and time for presentation
- Communicate:
 - Presentation is for all staff and residents
 - The session will be 30 minutes
 - A separate room or space is preferred



Prepare for Presentation

- Gather Materials
 - Pens
 - Sign in sheet
 - Hand sanitizer
 - N95 mask
 - Optional:* Printed Session Sign
 - Optional:* Paint-safe tape
 - Optional:* Print out of notes pages of presentation



Set up Presentation

- Set up space:
 - Clean workspace
 - Space chairs appropriately
 - Optional:* Display session sign



Welcome
to the
Session on
N95 and Fit Testing



- **Optional:** Hang this print out on the door of your meeting room



OBJECTIVE: Establish friendly connection with participants

SUGGESTED SCRIPT:

- Good Morning/Good Afternoon. My name is [*FACILITATOR NAME*].
- Our presentation for today is on **N95 and Fit Testing**. We know this is a topic you may already be familiar with so today will be a refresher for some and may provide new information and insight for others.
- Please make sure you have signed in.

What is Fit Testing? Why is it Important?

▶ What is Fit Testing?

- Fit Testing is the process to determine the proper fit and seal of an N95 or another respirator.

▶ Why is it important?

- Fit testing ensures everyone is using the brand and size respirator that provides the best seal and protection.
- OSHA regulation (29 CFR 1910.134) requires a fit test for anyone using an N95 or other respirator
- Respirators are designed to filter 95% of particles in the air. This provides protection against airborne pathogens, like COVID 19 and tuberculosis.
 - If respirators do not fit correctly, they cannot work correctly

OBJECTIVE: Explain the definition and importance of Fit Testing

SUGGESTED SCRIPT:

- What is Fit Testing?
 - Facilitator Note: Give people time to reply. Try to engage the participants. If no one answers, you may want to add “Has anyone gotten a fit test?”
- Why is it important?
- Fit Testing:
 - Ensures that the wearer is using the brand and size respirator that will provide the best seal – and therefore the greatest amount of protection.
 - Is required by OSHA regulations for anyone using an N95 or other respirator
 - Makes sure that the respirator is able to do it’s job – protect the wearer against airborne pathogens like COVID 19 and tuberculosis

Fit Test Facts

How often should staff be Fit tested?

- At least yearly
- After any significant weight gain or loss
- After facial surgery or significant facial injury
- For every brand and size of N95 used in your facility

Can everyone be Fit tested?

- A medical review is done prior to fit testing to rule out any contraindications.

What do I need to do before being Fit tested?

- Do not eat, drink or smoke for 15 minutes before being fit tested
- Facial hair must be cleaning shaven

Do I need to be Fit tested if I just did a seal check?

- Yes.
 - Seal checks do not replace Fit testing.
- Seal checks should be completed every time a new N95 is donned.

OBJECTIVE: Explain the definition and importance of Fit Testing

SUGGESTED SCRIPT:

- Review the details on the slide


What is the exact procedure for getting fit tested? What can I expect?

User Seal Check FAQ

Filtering out Confusion: Frequently Asked Questions about Respiratory Protection

User Seal Check

Over 3 million United States employees in approximately 1.3 million workplaces are required to wear respiratory protection. The Occupational Safety and Health Administration (OSHA) 29 CFR 1910.134 requires an annual fit test to ensure the fit of any respirator that forms a tight seal on the wearer's face before it is used in the workplace. Once a fit test has been done to determine the best respirator model and size for a particular user, a user seal check should be done every time the respirator is to be worn to ensure an adequate seal is achieved.




How to do a positive pressure user seal check

Once the particulate respirator is properly donned, place your hands over the facepiece, covering as much surface area as possible. Exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure is being built up inside the facepiece without any evidence of outward leakage of air at the seal. Examples of such evidence would be the feeling of air movement on your face along the seal of the facepiece, fogging of your glasses, or a lack of pressure being built up inside the facepiece.

If the particulate respirator has an exhalation valve, then performing a positive pressure check may be impossible. In such cases, a negative pressure check should be performed.

How to do a negative pressure user seal check

Negative pressure seal checks are typically conducted on particulate respirators that have exhalation valves. To conduct a negative pressure seal check, cover the filter surface with your hands as much as possible and then inhale. The facepiece should collapse on your face and you should not feel air passing between your face and the facepiece.



In the case of either type of seal check, if air leaks around the nose, use both hands to readjust the nosepiece by placing your fingertips at the top of the metal nose clip. Slide your fingertips down both sides of the metal strip to more efficiently mold the nose area to the shape of your nose. Readjust the straps along the sides of your head until a proper seal is achieved.¹

If you cannot achieve a proper seal due to air leakage, you may need to be fit tested for a different respirator model or size.

What is a User Seal Check?

A user seal check is a procedure conducted by the respirator wearer to determine if the respirator is being properly worn. The user seal check can either be a positive pressure or negative pressure check.

During a positive pressure user seal check, the respirator user exhales gently while blocking the paths for air to exit the facepiece. A successful check is when the facepiece is slightly pressurized before increased pressure causes outward leakage.

During a negative pressure user seal check, the respirator user inhales sharply while blocking the paths for air to enter the facepiece. A successful check is when the facepiece collapses slightly under the negative pressure that is created with this procedure.

A user seal check is sometimes referred to as a fit check. A user seal check should be completed each time the respirator is donned (put on). It is only applicable when a respirator has already been successfully fit tested on the individual.

How do I do a User Seal Check while Wearing a Filtering Facepiece Respirator?


Not every respirator can be checked using both positive and negative pressure. Refer to the manufacturer's instructions for conducting user seal checks on any specific respirator. This information can be found on the box or individual respirator packaging.

The following positive and negative user seal check procedures for filtering facepiece respirators are provided as examples of how to perform these procedures.

[References](#)
1. OSHA (2011), Respiratory Protection, 29 CFR 1910.134, Final rule, Fed Reg 76, 45312-45316.
2. OSHA (2011), Safety and health topics, 29 CFR 1910.134, Respiratory Protection, Chapter 1910, Section 134, Occupational Safety and Health, OSHA 3090 (NIOSH) Publication No. 2011-103, <https://www.osha-slc.gov/publications/OSHA-3090.pdf>
3. OSHA (2011), Training and Inflation (TI) Guidance for the User Seal Check for Filtering Facepiece Respirators, OSHA 3091, <https://www.osha-slc.gov/publications/OSHA-3091.pdf>
4. OSHA (2011), Training and Inflation (TI) Guidance for the User Seal Check for Filtering Facepiece Respirators, OSHA 3091, <https://www.osha-slc.gov/publications/OSHA-3091.pdf>

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[Fit Test FAQs](#) | [NPPTL](#) | [NIOSH](#) | [CDC](#)

 Penn Medicine

9

SUGGESTED SCRIPT:

- Facilitator Note: Perform seal check demonstration
- [Frequently Asked Questions about Respiratory Protection, User Seal Check | NIOSH | CDC](#)

9

Fit Test FAQ

Filtering out Confusion: Frequently Asked Questions about Respiratory Protection

Fit Testing

Over 3 million United States employees, in approximately 1.3 million workplaces, are required to wear respiratory protection. The Occupational Safety and Health Administration (OSHA) (29 CFR 1910.134) requires an annual respirator fit test to confirm the fit of any respirator that forms a tight seal on the wearer's face before it is used in the workplace. This ensures that users are receiving the expected level of protection by minimizing any contaminant leakage into the facepiece. The following are some frequently asked questions about respiratory protection and fit testing.



What is a Respirator Fit Test?

A fit test is conducted to verify that a respirator is both comfortable and (correctly) fits the user. Fit test methods are classified as either qualitative or quantitative. A qualitative fit test is a pass/fail test that relies on the individual's sensory detection of a test agent, such as taste, smell, or involuntary cough (a reaction to irritant smoke). A quantitative fit test uses an instrument to numerically measure the effectiveness of the respirator.

The benefits of a fit test include better protection for the employee and verification that the employee is wearing a correctly-fitting model and size of respirator.¹ Higher than expected levels of exposure to a contaminant may occur if the respirator has a poor face seal against the user's skin, which can result in leakage.

How Often Must Fit Testing Be Conducted?

In addition to fit testing upon initially selecting a model of respirator, OSHA requires that fit testing be conducted annually, and repeated "whenever an employee reports, or the employer or the physician or other licensed health care professional makes visual observations of changes in the employee's physical condition that could affect respirator fit (e.g. facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight)."²

The appropriate length of time between respirator fit tests has been a point of debate and discussion for many years due to its use of workplace time and resources, especially in reference to the commonly used filtering facepiece respirator (FFR).³ In response to these concerns, NIOSH completed a study that confirmed the necessity of the current OSHA respirator fit testing requirement, both annually and when physical changes have occurred.⁴



Once I am Fit Tested, Can I use any Brand/Make/Model Respirator as Long as it is the Same Size?

A successful fit test only qualifies an employee to use the specific brand/make/model and size of respirator that he or she wore during that test. Respirator fitting is not standardized across models or brands. For example, a medium in one model may not offer the same fit as a different manufacturer's medium model.

Can I Have Facial Hair and still be Fit Tested to Wear a Tight-Fitting Respirator?

The OSHA respirator standard prohibits tight-fitting respirators to be worn by workers who have facial hair that covers between the sealing surface of the facepiece and the face of the wearer. 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.

Research tells us that the presence of facial hair under the sealing surface causes 20 to 1000 times more leakage compared to clean-shaven individuals.⁵ Gases, vapors, and particles in the air will take the path of least resistance and bypass the part of the respirator that captures or filters hazards out. A common misconception is that human hair can act as a crude filter to capture any particles that are in the airstream between the sealing surface and the user's skin. However, while human hair appears to be very thin to the naked eye, hair is much larger in size than the particles inhaled. Facial hair is not dense enough and the individual hairs are too large to capture particles like an air filter does, nor will a beard trap gases and vapors like the carbon bed in a respirator cartridge. Therefore, the vast majority of particles, gases, and vapors follow the air stream right through the facial hair and into the respiratory tract of the wearer. In fact, some studies have shown that even a day or two of stubble can begin to reduce protection.⁶

Do Powered Air-Purifying Respirators (PAPRs) Require Fit Testing?

The answer to this question depends on the type of facepiece that the respirator has. Any facepieces that form a tight seal to the wearer's face (e.g. full-masks and full facepieces, must be fit tested. Loose-fitting PAPRs, in which the hood or helmet is designed to form only a partial seal with the wearer's face or hood which seal loosely around the wearer's neck or shoulders, do not require fit testing.

Where can I Find More Information?

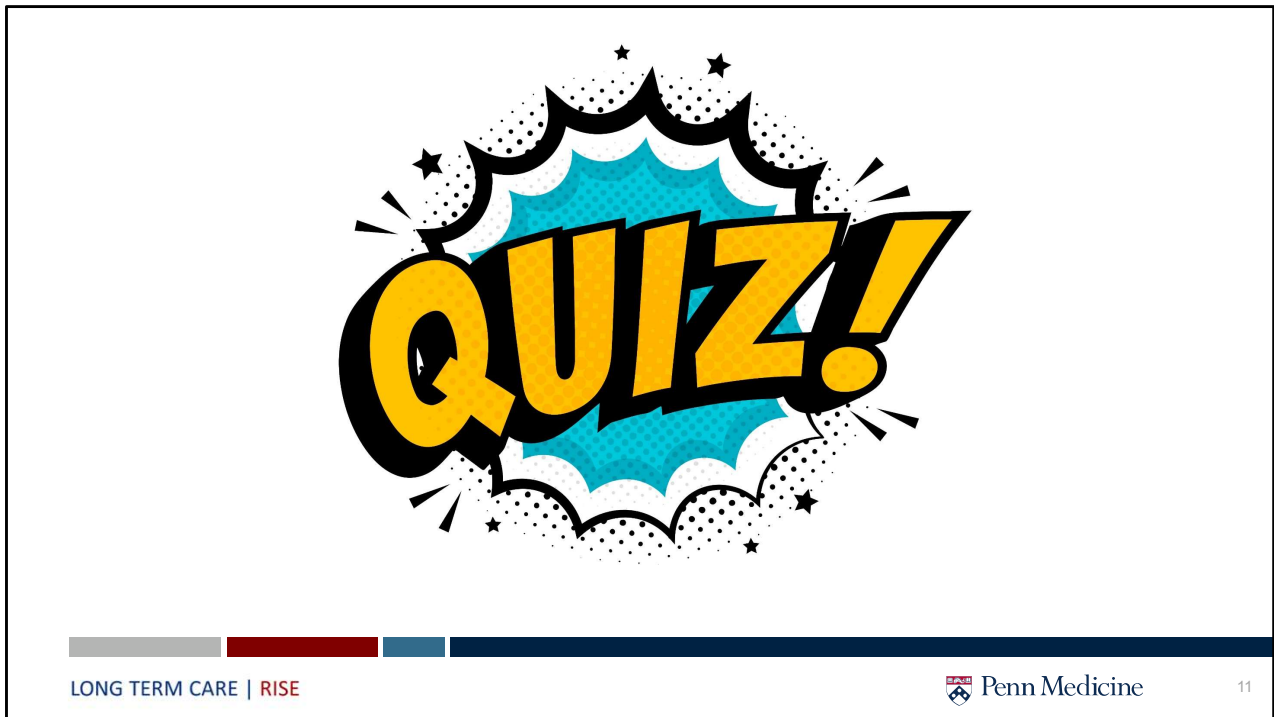
This information and more is available on the [NIOSH Respirator Trained-Source webpage](#).

¹OSHA's respirator standard requires that the employer conduct fit tests. NIOSH's fit test requirements (2015) are the preferred method of FFR fit tests and can be adapted to other types of respirators. For more information on fit testing, visit [www.cdc.gov/niosh/occupational/respirators/fit-testing.html](#).
²29 CFR 1910.134(g)(5)(ii).
³29 CFR 1910.134(g)(5)(ii).
⁴Chang, C.C., Lawrence, R.B., Shinn, G., Collier, C.C. (2015). Standardized workplace protection systems to help respirator respiratory protection services. *Occupational Medicine*, 65(4), 441-445.
⁵Chang, C.C., Lawrence, R.B., Shinn, G., Collier, C.C. (2015). Standardized workplace protection systems to help respirator respiratory protection services. *Occupational Medicine*, 65(4), 441-445.
⁶Chang, C.C., Lawrence, R.B., Shinn, G., Collier, C.C. (2015). Standardized workplace protection systems to help respirator respiratory protection services. *Occupational Medicine*, 65(4), 441-445.

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DHHS (OSHA) Publication No. 3018-120

SUGGESTED SCRIPT:

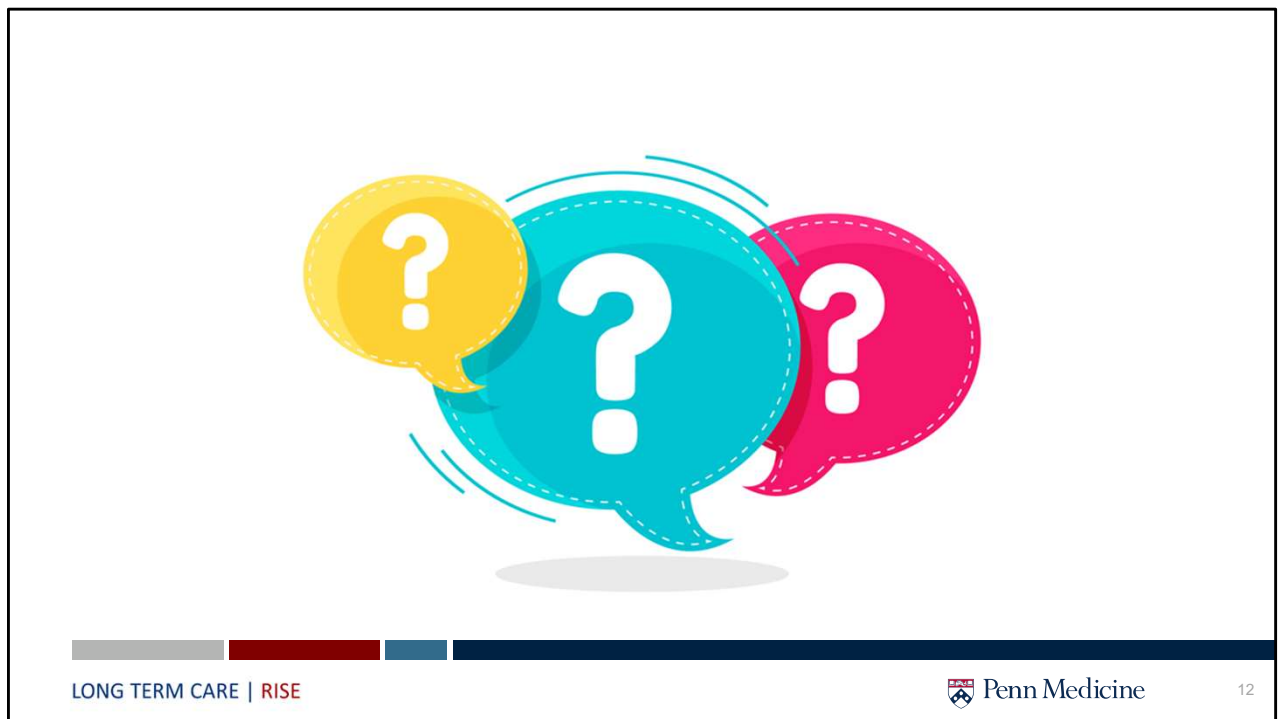
- [Respiratory Fit Testing \(Pruebas de Ajuste de los Respiradores\) | Occupational Safety and Health Administration \(osha.gov\)](#)
- [Frequently Asked Questions about Respiratory Protection, Fit Testing | NIOSH | CDC](#)



OBJECTIVE: To confirm the participants understand the key lessons on Fit testing.

SUGGESTED SCRIPT:

- Pop quiz!
- These questions are True/False. If you think it is true, give me a thumbs up. If it is false, give me a thumbs down.
- I only need to be fit tested once. FALSE (yearly, after weight changes or facial surgery, for every new brand of mask)
- I have asthma, I cannot be fit tested. FALSE (a medical review will be done to ensure an N95 is safe for each individual, pre existing conditions do not necessarily preclude use of a respirator)
- A properly fit and donned N95 will help protect me from airborne pathogens. TRUE



OBJECTIVE: To give participants time to ask any questions they may have.

SUGGESTED SCRIPT:

- What questions do you have about what you learned today?
 - Facilitator note: By asking in this way, rather than “does anyone have any questions” you are showing that you assume people will have questions, which will make participants more likely to ask questions if they have one.



SUGGESTED SCRIPT

- Thank you for your participation today! That concludes our presentation on Hand Hygiene for healthcare workers!
- Please remember to sign in the attendance sheet
 - **Facilitator Note:** Wipe Down surfaces touched; Leave area like you found it. Provide Leave Behinds and/or copy of presentation