



## Fit Testing and Use of N95 Respirators

*Please Note: N95 respirators/masks are critical supplies that must be reserved for health care workers and other medical first responders. The US Centers for Disease Control and Prevention (CDC) does not recommend N95 respirators for the general public. For information on CDC guidance for cloth face coverings for the general public, visit:*

*<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html>*

*This guidance was adapted from materials provided by the US Occupational Safety and Health Administration (OSHA), US Centers for Disease Control and Prevention, and others and is intended for health care workers and other first responders.*

### **What is an “N95”?**

**N95 Respirator.** An N95 respirator is a respiratory protective device designed to achieve a very close facial fit and very efficient filtration of airborne particles. The “N95” designation means that when subjected to careful testing, the respirator blocks at least 95% of very small (0.3 micron) test particles.

To ensure that the N95 respirator works as intended, the user must be fit-tested before using it.

## **Fit Testing for N95 Respirators**

### **What is a fit test?**

A “fit test” checks the seal between the respirator's face piece and your face. N95 respirators come in different sizes, and sizing differs with each model. Fit testing helps users determine the proper size N95 to use.

Qualitative fit testing is a pass/fail test method that uses your sense of taste or smell or your reaction to an irritant to detect leakage into the respirator face piece.

### **Who needs respirator fit testing and when should they be fit tested?**

Fit testing must be performed before the employee meets any respiratory hazards in the workplace. Typically, employers have new hires fitted immediately.

The US Occupational Safety and Health Administration (OSHA) also requires those who wear respirators to be refitted annually.

The OSHA respiratory protection standard requires an initial medical evaluation to determine the employee's ability to use a respirator before the employee is fit tested or required to use the respirator in the workplace. There is not a specific annual requirement for medical evaluations in the standard.

The wearer must be fit tested after completing their medical form and having it reviewed by a medical professional. A copy of the questions in the OSHA medical form is included at the end of this document.

### **How do you perform a fit test?**

Testing involves using special equipment to check the wearer's sensitivity/ability to smell a solution a) without a respirator, b) when wearing a respirator, and c) when wearing a respirator and performing seven exercises for one minute each:

1. Normal breathing.
2. Deep breathing.
3. Moving head side to side.
4. Moving head up and down.
5. Bending over.
6. Talking.
7. Normal breathing again.

This video from 3M describes the testing procedure for fit testing.

<https://www.youtube.com/watch?v=xl4qX6qEYXU>

Testing kits can be purchased from several retailers.

### **Does one have to shave before being fit tested?**

While the OSHA standard does not ban beards per se, it does require employers to ensure that bearded employees who are required to wear tight-fitting face pieces trim their beards so that they do not interfere with the sealing surface of the respirator or are not so large that they could interfere with valve function.

### **What is face fit testing training?**

Qualitative face fit testing courses are available for those who wish to be able to manage the respiratory protective equipment (RPE) within their organization and conduct in-house face fit services for their staff.

## **MORE ABOUT N95 USE**

### **How long does an N95 mask last?**

Under normal circumstances, N95 respirators should be worn for a maximum of eight hours and should be replaced regularly.

N95 respirators may be in short supply during the COVID-19 pandemic. As a result, the US Centers for Disease Control and Prevention issued guidance on conserving this equipment and extending its supply. Full guidance is available here:

<https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html>, but excerpts are included below.

### **When should the N95 mask be thrown away?**

Discard any respirator that is obviously damaged or becomes hard to breathe through. A damaged or deformed mask may not fit properly.

### **Can you reuse an N95 mask?**

Extended use is favored over reuse because it is expected to involve less touching of the respirator and therefore less risk of contact transmission.

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

If extended use of N95 respirators is permitted, respiratory protection program administrators should ensure adherence to administrative and engineering controls to limit potential N95 respirator surface contamination (e.g., use of barriers to prevent droplet spray contamination) and consider additional training and reminders (e.g., posters) for staff to reinforce the need to minimize unnecessary contact with the respirator surface, strict adherence to hand hygiene practices, and proper Personal Protective Equipment (PPE) [donning and doffing technique](#).

Healthcare facilities should develop clearly written procedures to advise staff to take the following steps to reduce contact transmission after donning:

- Discard N95 respirators following use during aerosol generating procedures.
- Discard N95 respirators contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients.
- Discard N95 respirators following close contact with, or exit from, the care area of any patient co-infected with an infectious disease requiring contact precautions.
- Consider use of a cleanable face shield (preferred) over an N95 respirator and/or other steps (e.g., masking patients, use of engineering controls) to reduce surface contamination.
- Perform hand hygiene with soap and water or an alcohol-based hand sanitizer before and after touching or adjusting the respirator (if necessary for comfort or to maintain fit).

Extended use alone is unlikely to degrade respiratory protection. However, healthcare facilities should develop clearly written procedures to advise staff to:

- Discard any respirator that is obviously damaged or becomes hard to breathe through.

### **Reuse of N95 Masks**

- Hang used respirators in a designated storage area or keep them in a clean, breathable container such as a paper bag between uses. To minimize potential cross-contamination, store respirators so that they do not touch each other and the person using the respirator is clearly identified. Storage containers should be disposed of or cleaned regularly.
- Clean hands with soap and water or an alcohol-based hand sanitizer before and after touching or adjusting the respirator (if necessary for comfort or to maintain fit).
- Avoid touching the inside of the respirator. If inadvertent contact is made with the inside of the respirator, discard the respirator and perform hand hygiene as described above.
- Use a pair of clean (non-sterile) gloves when donning a used N95 respirator and performing a user seal check. Discard gloves after the N95 respirator is donned and any adjustments are made to ensure the respirator is sitting comfortably on your face with a good seal.

### **Can an N95 mask be cleaned?**

On April 12, 2020, the US Food and Drug Administration issued an emergency use authorization (EUA) for a decontamination process that could sterilize N95 masks. However, this process can only be done through specific sterilization systems located in hospitals.

Otherwise, N95 masks cannot be cleaned or disinfected.

### **For more information:**

- OSHA Respiratory Protection Page: [www.osha.gov/respirators](http://www.osha.gov/respirators)
- National Institute for Occupational Safety and Health: [www.cdc.gov/niosh/topics/respirators](http://www.cdc.gov/niosh/topics/respirators)
- OSHA-issued videos in English and Spanish for employees regarding the importance of fit testing and fit testing procedures:  
[https://www.osha.gov/video/respiratory\\_protection/fittesting.html](https://www.osha.gov/video/respiratory_protection/fittesting.html)

**OSHA Medical Evaluation Questionnaire that all fit tested personnel must complete and be evaluated by a medical professional.**

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**Appendix C to Sec. 1910.134: OSHA Respirator Medical Evaluation Questionnaire (Mandatory)**

PDF Available here: <https://www.osha.gov/Publications/OSHA3789info.pdf>

To the employer: Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee:

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Part A. Section 1. (Mandatory) The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date: \_\_\_\_\_

2. Your name: \_\_\_\_\_

3. Your age (to nearest year): \_\_\_\_\_

4. Sex (circle one): Male/Female

5. Your height: \_\_\_\_\_ ft. \_\_\_\_\_ in.

6. Your weight: \_\_\_\_\_ lbs.

7. Your job title: \_\_\_\_\_

8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): \_\_\_\_\_

9. The best time to phone you at this number: \_\_\_\_\_

10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No

11. Check the type of respirator you will use (you can check more than one category):

a. \_\_\_\_\_ N, R, or P disposable respirator (filter-mask, non-cartridge type only).

b. \_\_\_\_\_ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

12. Have you worn a respirator (circle one): Yes/No

If "yes," what type(s): \_\_\_\_\_

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Part A. Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

1. Do you *currently* smoke tobacco, or have you smoked tobacco in the last month: Yes/No
2. Have you *ever had* any of the following conditions?
  - a. Seizures: Yes/No
  - b. Diabetes (sugar disease): Yes/No
  - c. Allergic reactions that interfere with your breathing: Yes/No
  - d. Claustrophobia (fear of closed-in places): Yes/No
  - e. Trouble smelling odors: Yes/No
3. Have you *ever had* any of the following pulmonary or lung problems?
  - a. Asbestosis: Yes/No
  - b. Asthma: Yes/No
  - c. Chronic bronchitis: Yes/No
  - d. Emphysema: Yes/No
  - e. Pneumonia: Yes/No
  - f. Tuberculosis: Yes/No
  - g. Silicosis: Yes/No
  - h. Pneumothorax (collapsed lung): Yes/No
  - i. Lung cancer: Yes/No
  - j. Broken ribs: Yes/No
  - k. Any chest injuries or surgeries: Yes/No
  - l. Any other lung problem that you've been told about: Yes/No
4. Do you *currently* have any of the following symptoms of pulmonary or lung illness?
  - a. Shortness of breath: Yes/No
  - b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes/No
  - c. Shortness of breath when walking with other people at an ordinary pace on level ground: Yes/No
  - d. Have to stop for breath when walking at your own pace on level ground: Yes/No
  - e. Shortness of breath when washing or dressing yourself: Yes/No

- f. Shortness of breath that interferes with your job: Yes/No
- g. Coughing that produces phlegm (thick sputum): Yes/No
- h. Coughing that wakes you early in the morning: Yes/No
- i. Coughing that occurs mostly when you are lying down: Yes/No
- j. Coughing up blood in the last month: Yes/No
- k. Wheezing: Yes/No
- l. Wheezing that interferes with your job: Yes/No
- m. Chest pain when you breathe deeply: Yes/No
- n. Any other symptoms that you think may be related to lung problems: Yes/No

5. Have you *ever had* any of the following cardiovascular or heart problems?

- a. Heart attack: Yes/No
- b. Stroke: Yes/No
- c. Angina: Yes/No
- d. Heart failure: Yes/No
- e. Swelling in your legs or feet (not caused by walking): Yes/No
- f. Heart arrhythmia (heart beating irregularly): Yes/No
- g. High blood pressure: Yes/No
- h. Any other heart problem that you've been told about: Yes/No

6. Have you *ever had* any of the following cardiovascular or heart symptoms?

- a. Frequent pain or tightness in your chest: Yes/No
- b. Pain or tightness in your chest during physical activity: Yes/No
- c. Pain or tightness in your chest that interferes with your job: Yes/No
- d. In the past two years, have you noticed your heart skipping or missing a beat: Yes/No
- e. Heartburn or indigestion that is not related to eating: Yes/No
- d. Any other symptoms that you think may be related to heart or circulation problems: Yes/No

7. Do you *currently* take medication for any of the following problems?

- a. Breathing or lung problems: Yes/No

b. Heart trouble: Yes/No

c. Blood pressure: Yes/No

d. Seizures: Yes/No

8. If you've used a respirator, have you *ever had* any of the following problems? (If you've never used a respirator, check the following space and go to question 9:)

a. Eye irritation: Yes/No

b. Skin allergies or rashes: Yes/No

c. Anxiety: Yes/No

d. General weakness or fatigue: Yes/No

e. Any other problem that interferes with your use of a respirator: Yes/No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No