PANDEMIC RESPIRATOR
FIT TESTING
Policy and Procedure
Title: Facility Pandemic Respirator Fit Testing

Policy
To ensure each staff member is fit tested for a respirator to the extent of the facilities professional capabilities.

Procedure
Testing will be conducted by the Medical Director, DON, or appointed designee.

Prior to testing the test administrator will:
- Have test subjects watch the following OSHA videos
  - https://www.youtube.com/watch?v=6qkXV4kmp7c
- Explain the details of the process to the test subject(s).
- Ensure all medical clearance questionnaires are completed and reviewed (Attached)
- Answer any questions from test subject(s)

Please note:
- The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed
- If the subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

Conduct Solution Sensitivity Test:
Facilities using banana oil ampules skip to 'Mask Selection and Fitting'

1. Place test enclosure (“hood”) over subject’s head
   A. The enclosure should not be closed/sealed at the bottom.
2. Ask the test subject to stick out their tongue and continue breathing normally.
3. Spray the test solution into the test enclosure
   A. You should administer up to 10 short bursts until the test subject indicates that they taste the solution.
      i. If they do not taste it, administer 10 more bursts (20 total).
      ii. If they again do not taste it, administer 10 more bursts (30 total).
4. Note either 10, 20, or 30 (round up) as the number of bursts required for the subject to taste the saccharin. This is called the 'taste threshold'.
Mask Selection and Fitting:
1. Have test subject choose an appropriately sized respirator.
   A. The test subject shall be instructed to hold each size respirator up to the face and eliminate those that obviously do not give an acceptable fit.
   B. The more acceptable facepieces are noted in case the one selected proves unacceptable.
2. Demonstrate how to properly don a respirator
   A. N95
      i. Hold the mask over the nose and mouth
      ii. Pull the top strap over the head and place it under the crown of the head and above the ears
      iii. Pull the bottom strap over the head and place it at the back of the neck.
      iv. Press the nose piece on both sides to mold the mask to the face
   B. KN95
      i. Place elastic loop behind each ear
      ii. Press the nose piece on both sides to mold the mask to the face
3. Check for:
   A. Proper chin placement
   B. Adequate strap tension, not overly tight
   C. Proper fit across the nose bridge
   D. Proper sizing—must span the distance from nose to chin
   E. Respirators tendency to slip
2. Have subjects conduct a self-observation in mirror to evaluate fit and respirator position.
4. Have the subject assess for comfort by wearing the respirator for 5 minutes and ensure there is:
   A. Room for eye protection
   B. Room to talk

User Seal Check:
1. Have the subject conduct user seal checks
   a. Please see the ‘Conducting a User Seal Check’ policy on page 5 for instructions.
2. Another respirator must be selected and retested if the test subject fails the user seal check tests.
3. Explain to the subject that a seal test must be performed each time they don their respirator.

Fit Testing with an Aerosol Solution:
Facilities using ampoules refer to ‘Fit Testing with Banana Oil Ampoules’ on page 6
1. After user seal checks are complete, have the subject stand and once again don their hood enclosures. Remind the subject not to take the hood off during fit test and also to keep mouth open slightly as this is a taste test.
2. Begin filling the enclosure with 10, 20 or 30 bursts from the test solution nebulizer.
   A. The number of bursts depends on the subject’s taste threshold determined previously
3. From this point on, administer half as many bursts (5, 10 or 15) every 30 seconds to sustain the test atmosphere inside the enclosure during the exercises.
A. Instruct the subject to inform you immediately if the test solution is tasted during the fit test.

4. Instruct the subject to perform the following exercises for one minute each:
   A. Normal breathing
   B. Deep breathing
      i. The subject should breathe deeply and slowly, using caution to prevent hyperventilation.
   C. Turning head side to side
      i. The subject should turn their head side to side from one extreme to the other repeatedly. This part should be performed slowly.
   D. Turning head up and down
      i. The subject should turn their head up and down from one extreme to the other repeatedly. This part should be performed slowly.
   E. Talking
      i. The subject should count from 1-60 out loud. The numbers should be said slowly and loud enough to be heard outside the enclosure.
   F. Bending at the waist
      i. The subject should bend at the waist as though touching their toes.
         a. Running in place may be used instead. Subject should hold hood so it doesn’t fall.
   G. Normal Breathing

5. If the subject tastes the test solution at any time, you must either refit the respirator and/or try a different size/style. Fit test must be restarted.

**Completing the Fit Test:**

1. If the subject has not tasted the test solution during the exercises, the fit test is passed.
2. The hood should be removed and sterilized.
3. The subject should wash their face and hands.
4. Have the subject sign the Respirator Attestation form (Attached)

*Attachments:* Respirator Medical Evaluation Questionnaire
Respirator Attestation
Policy and Procedure

Title: Conducting a User Seal Check

Policy
To ensure each staff member knows how to conduct a user seal check according to The National Personal Protective Technology Laboratory (NPPTL) standard.

Procedure
Prior to conducting the negative and positive pressure checks, the subject shall seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths.

Positive Pressure Check
1. Once the particulate respirator is properly donned, put your hands over the facepiece, covering as much surface area as possible.
2. 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:
   A. The feeling of air trickling onto the face along the seal of the facepiece
   B. Fogging glasses
   C. Lack of pressure being built up inside the facepiece.

If the respirator has an exhalation valve, performing a positive pressure check may be impossible. If so, conduct a negative pressure check.

Negative Pressure Check
Negative pressure seal checks are conducted on particulate respirators that have exhalation valves.

1. 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.
Policy and Procedure

Title: Fit Testing with Banana Oil Ampoules

Policy
To ensure each staff member is fit tested for a respirator to the extent of the facilities professional capabilities.

Procedure

Preparation:
1. Create a 2 ft. diameter testing chamber using a large drum liner or plastic sheeting in a room with a door or window.
   A. Top of the chamber will need to be 6 inches above the test subjects head.
2. Create a place on the top of the chamber (inside) to store the ampoule during testing.
3. Prior to starting the test open a door or window to help with ventilation. – test may also be conducted outdoors.

Fit Test:
1. After the respirator has been properly donned and user seal checks are completed, have the test subject double glove and issue him or her an ampoule
2. Have the test subject leave the instruction room and enter the testing room
   A. Testing must take place in a separate room or outdoors
3. Instruct the subject to enter the test chamber
4. Have the subject open the ampoule and place it in the holder at the top of the chamber
5. Wait 2 minutes
6. Instruct the subject to inform you immediately if the test solution is detected during the fit test.
7. Instruct the subject to perform the following exercises for one minute each:
   A. Normal breathing
   B. Deep breathing
      i. The subject should breathe deeply and slowly, using caution to prevent hyperventilation.
   C. Turning head side to side
      ii. The subject should turn their head side to side from one extreme to the other repeatedly. This part should be performed slowly.
   D. Turning head up and down
      iii. The subject should turn their head up and down from one extreme to the other repeatedly. This part should be performed slowly
   E. Talking
      iv. The subject should count from 1-60 out loud. The numbers should be said slowly and loud enough to be heard outside the enclosure.
F. Bending at the waist
   v. The subject should bend at the waist as though touching their toes.
      a. Running in place may be used instead. Subject should hold hood so it doesn't fall.

G. Normal Breathing
8. If the subject detects the test solution at any time, you must either refit the respirator and/or try a different size/style. Fit test must be restarted.

Completing the Fit Test:
1. If the subject has not detected the test solution during the exercises, the fit test is passed
2. To demonstrate the efficiency of the test procedure, have the subject break the respirator face seal and take a breath
3. Instruct the subject to remove the ampoule from its designated place inside the chamber and place it in a self-sealing plastic bag.
   A. This will ensure a buildup in the chamber does not occur during subsequent tests and will avoid the test area from being contaminated
4. Have the subject sign the Respirator Attestation form
Respirator Medical Evaluation Questionnaire

This information is considered HIPAA protected and is confidential. It will only be seen by Administrator, Director of Nursing, and Medical Director. This information will be filed in the medical record for each employee.

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).

Today's date:______________________________

Your name:______________________________________

Your age (to nearest year):__________________________

Sex (circle one): Male/Female

Your height: ________ ft. ________ in.

Your weight: ________ lbs.

Your job title:_____________________________________

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

The best time to phone you at this number: ___________________________

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

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

☐ N, R, or P disposable respirator (filter-mask, non-cartridge type only).
☐ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

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

If "yes," what type(s):_________________________________________________________
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
   f. 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
Part B Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes/No

   If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes/No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: Yes/No

   If "yes," name the chemicals if you know them:
   ____________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:
   a. Asbestos: Yes/No
   b. Silica (e.g., in sandblasting): Yes/No
   c. Tungsten/cobalt (e.g., grinding or welding this material): Yes/No
   d. Beryllium: Yes/No
   e. Aluminum: Yes/No
   f. Coal (for example, mining): Yes/No
   g. Iron: Yes/No
   h. Tin: Yes/No
   i. Dusty environments: Yes/No
   j. Any other hazardous exposures: Yes/No

   If "yes," describe these exposures:
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

4. List any second jobs or side businesses you have:________________________________________

   __________________________________________________________________________

5. List your previous occupations:____________________________________________________

   __________________________________________________________________________

6. List your current and previous hobbies:_____________________________________________

   __________________________________________________________________________
7. Have you been in the military services? Yes/No

If "yes," were you exposed to biological or chemical agents (either in training or combat): Yes/No

8. Have you ever worked on a HAZMAT team? Yes/No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes/No

If "yes," name the medications if you know them:_______________________

10. Will you be using any of the following items with your respirator(s)?
   a. HEPA Filters: Yes/No
   b. Canisters (for example, gas masks): Yes/No
   c. Cartridges: Yes/No

11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:
   a. Escape only (no rescue): Yes/No
   b. Emergency rescue only: Yes/No
   c. Less than 5 hours per week: Yes/No
   d. Less than 2 hours per day: Yes/No
   e. 2 to 4 hours per day: Yes/No
   f. Over 4 hours per day: Yes/No

12. During the period you are using the respirator(s), is your work effort:
   a. Light (less than 200 kcal per hour): Yes/No

      If "yes," how long does this period last during the average shift:___________hrs.___________mins.

      Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines.

   b. Moderate (200 to 350 kcal per hour): Yes/No

      If "yes," how long does this period last during the average shift:___________hrs.___________mins.
Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

c. **Heavy (above 350 kcal per hour): Yes/No**

If "yes," how long does this period last during the average shift: __________ hrs. __________ mins.

Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. **Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator:** Yes/No

If "yes," describe this protective clothing and/or equipment:________________________________________

14. **Will you be working under hot conditions (temperature exceeding 77 deg. F):** Yes/No

15. **Will you be working under humid conditions:** Yes/No

16. **Describe the work you'll be doing while you're using your respirator(s):**

_______________________________________________________________________

17. **Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases):**

_______________________________________________________________________

18. **Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):**

Name of the first toxic substance:___________________________________________
Estimated maximum exposure level per shift:__________________________
Duration of exposure per shift:__________________________________________
Name of the second toxic substance:______________________________________
Estimated maximum exposure level per shift:__________________________
Duration of exposure per shift:_____________________________________
Name of the third toxic substance:___________________________________
Estimated maximum exposure level per shift:__________________________
Duration of exposure per shift:_____________________________________
The name of any other toxic substances that you'll be exposed to while using your respirator:___________________________________________

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):
____________________________________________________________________
____________________________________________________________________
Respirator Attestation

I, ______________________________________________ attest that the following has been completed regarding the N95/ KN95 respirator.

1. Viewed the OSHA respirator training videos
2. Have been instructed on respirator fitting.
3. Participated in the facility fit test
4. Have received training and understand how to successfully complete a user seal check

_______________________________________________
Employee Signature

_______________________________________________
Date
Enforcement Memos

/ Temporary Enforcement Guidance - Healthcare Respiratory Protection Annual Fit-Testing for N95 Filtering Facepieces During the COVID-19 Outbreak

March 14, 2020

MEMORANDUM FOR:

REGIONAL ADMINISTRATORS
STATE DESIGNEES

THROUGH:

AMANDA EDENS
Deputy Assistant Secretary

FROM:

PATRICK J. KAPUST, Acting Director
Directorate of Enforcement Programs

SUBJECT:

Temporary Enforcement Guidance - Healthcare Respiratory Protection Annual Fit-Testing for N95 Filtering Facepieces During the COVID-19 Outbreak

This memorandum provides temporary enforcement guidance to Compliance Safety and Health Officers for enforcing the Respiratory Protection standard, 29 CFR § 1910.134, with regard to supply shortages of N95 filtering facepiece respirators due to the COVID-19 outbreak. The Respiratory Protection standard has specific requirements, including a written program, medical evaluation, fit-testing, and training, that employers must follow to ensure workers are provided and are properly using appropriate respiratory protection when necessary to protect their health.1 On March 11, 2020, the President directed the Department of [Health and Human services to “take all appropriate and necessary steps with respect to general use respirators to facilitate their emergency use by healthcare personnel in healthcare facilities and elsewhere,” and he directed the Department of Labor to “consider all appropriate and necessary steps to increase the availability of respirators.”] In light of the Presidential Memorandum, OSHA is providing this temporary guidance for 29 CFR § 1910.134, regarding required annual fit-testing (paragraph (f)(2)), which is to take effect from the date of this memorandum and remain in effect until further notice.

The Centers for Disease Control and Prevention (CDC) currently recommends that Health Care Providers (HCP), who are providing direct care of patients with known or suspected COVID-19, practice infection control procedures. These include engineering controls (e.g., airborne infection isolation rooms), administrative controls (e.g., cohorting patients, designated HCP), work practices (e.g., handwashing, disinfecting surfaces), and appropriate use of personal protective equipment (PPE), such as gloves, face shields or other eye protection, and gowns.

Appropriate respiratory protection is required for all healthcare personnel providing direct care of these patients. For additional guidance, see COVID-19 Hospital Preparedness Assessment Tool, https://www.cdc.gov/coronavirus/2019-ncov/hcp/hcp-hospital-checklist.html.
OSHA recommends HCP employers follow existing CDC guidelines, including taking measures to conserve supplies of these respirators while safeguarding HCP. One such measure is that healthcare employers may provide HCP with another respirator of equal or higher protection, such as N99 or N100 filtering facepieces, reusable elastomeric respirators with appropriate filters or cartridges, or powered air purifying respirators (PAPR). Another measure is that healthcare employers may change the method of fit testing from a destructive method (i.e., quantitative) to a non-destructive method (i.e., qualitative). For filtering facepiece respirators, qualitative and quantitative fit-testing methods are both effective at determining whether the respirator fits properly. See 29 CFR § 1910.134, Appendix A, Fit Testing Procedures. 2 The fitted respirator can then be safely used for work tasks that require respiratory protection. For additional guidance, see Strategies for Optimizing the Supply of N95 Respirators, https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirator-supply-strategies.html. 3

OSHA field offices shall exercise enforcement discretion concerning the annual fit testing requirement, 29 CFR § 1910.134(f)(2), as long as employers:

- Make a good-faith effort to comply with 29 CFR § 1910.134;

- Use only NIOSH-certified respirators;

- Implement CDC and OSHA strategies for optimizing the supply of N95 filtering facepiece respirators and prioritizing their use, as discussed above;

- Perform initial fit tests for each HCP with the same model, style, and size respirator that the worker will be required to wear for protection against COVID-19 (initial fit testing is essential to determine if the respirator properly fits the worker and is capable of providing the expected level of protection);

- Inform workers that the employer is temporarily suspending the annual fit testing of N95 filtering facepiece respirators to preserve and prioritize the supply of respirators for use in situations where they are required to be worn;

- Explain to workers the importance of performing a user seal check (i.e., a fit check) at each donning to make sure they are getting an adequate seal from their respirator, in accordance with the procedures outlined in 29 CFR § 1910.134, Appendix B-1, User Seal Check Procedures. 4 See also, OSHA tutorial videos (English, Spanish). 5

- Conduct a fit test if they observe visual changes in the employee’s physical condition that could affect respirator fit (e.g., facial scarring, dental changes, cosmetic surgery, or obvious changes in body weight) and explain to workers that, if their face shape has changed since their last fit test, they may no longer be getting a good facial seal with the respirator and, thus, are not being adequately protected; and,

- Remind workers that they should inform their supervisor or their respirator program administrator if the integrity and/or fit of their N95 filtering facepiece respirator is compromised.

NOTE: Workers should visually inspect the N95 respirator to determine if the structural and functional integrity of the respirator has been compromised. Over time, components such as the straps, nose bridge, and nose foam material may degrade, which can affect the quality of the fit and seal. If the structural and functional integrity of any part of the respirator is compromised, or if a successful user seal check cannot be performed, discard the respirator and try another respirator.
Where the use of respiratory protection is required and an employer fails to comply with any other requirements, such as initial fit testing, maintenance, care, and training in the Respiratory Protection standard, cite the applicable section(s) of 29 CFR § 1910.134.

To emphasize, this is an enforcement discretion policy, beginning from the date of this memorandum, and applicable where respirators are needed to protect HCP during the COVID-19 outbreak. This temporary enforcement discretion policy will no longer apply upon notification. If you have any questions regarding this policy, please contact Dr. Dionne Williams at (202) 693-2140.

cc: DCSP
    DTSEM
    DSG

[Correction 4/14/2020]


5 See OSHA respirator videos at: https://www.youtube.com/watch?v=Tzpz5fko-fg (English); https://www.youtube.com/watch?v=jgR KuRcTGeE (Spanish).

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