



HEALTH HOLDING

HAFER ALBATIN HEALTH
CLUSTER
MATERNITY AND
CHILDREN HOSPITAL

Department:	Infection Prevention and Control Department		
Document:	Multidisciplinary Policy and Procedure (MPP)		
Title:	Fit Test Policy		
Applies To:	Health Care Workers		
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1. PURPOSE:

- 1.1 To assure the expected level of protection is provided by minimizing the total amount of contaminant leakage into the face piece.

2. DEFINITONS:

- 2.1 Fit testing: Achieving an adequate seal to the face is essential. Conduct a user seal check each time the respirator is used. aerosols to large droplets. These respirators filter out at least %95 of very small (less than 0.3 micron) particles
- 2.2 User Seal Checking (formerly known as Fit Check): A simple procedure intended to help the wearer verify that he/she has properly put on the respirator. To seal check a respirator, the wearer should forcefully inhale and exhale several times. The respirator should collapse slightly upon inhaling and expand upon exhaling. It should be completed each time the respirator is donned and is only applicable when a respirator has already been successfully fit tested on the individual
- 2.3 Respirator fit Test: The use of a protocol to evaluate the fit of a respirator qualitatively or quantitatively on an individual There are two types of respirator Fit test:
 - 2.3.1 Quantitative Fit testing: A test method uses an instrument to assess the amount of leakage into the respirator to assess the adequacy of respirator fit. Uses a machine to measure the actual amount of leakage into the face piece and does not rely on a sense of taste, smell, or irritation to detect leakage. It produces a numerical result called a "fit factor." A fit factor of at least 100 is required for half-mask respirators.
 - 2.3.2 Qualitative Fit testing: Qualitative fit testing is a pass/fail test method that uses the sense of taste or smell or reaction to an irritant to detect leakage into the respirator face piece.

3. POLICY:

- 3.1 Fit testing must be done for all health care workers before using a respirator in the workplace.
- 3.2 Respirators should be worn as part of Airborne Precautions.
- 3.3 Fit testing is recommended to be every 2 years as a part of the renewal of BICSL License.
- 3.4 Fit testing must be repeated at any time when there is a facial change. Examples: Weight loss, cosmetic surgery, facial scarring, the installation of dentures or the absence of dentures that are normally worn by the individual
- 3.5 **Quantitative respirator Fit test is PREFERRED to be used**
- 3.6 **Fit Testing and Powered Air-Purifying Respirator (PAPR) use is not mandatory for healthcare workers who do not have in-patient responsibilities, except for critical procedures or specialized patient care. In such cases, healthcare workers should consult with the relevant branch of the Ministry to determine the appropriate supportive measures.**

4. PROCEDURE:

- 4.1 Indication of fit testing: All health care workers with potential exposure to airborne transmissible diseases that necessitates the use of N95 respirator.

- 4.1.1 Timing and frequency of fit testing:
 - 4.1.1.1 Fit testing must be performed before starting the use of a respirator.
 - 4.1.1.2 **According to GDIPC new regulations, fit testing is now recommended to be every 2 years as a part of the renewal of BICSL License.**
 - 4.1.1.3 Fit testing must be repeated at any time when there is a facial change.
Examples: Weight loss, cosmetic surgery, facial scarring, the installation of dentures or the absence of dentures that are normally worn by the individual.
- 4.2 Fit testing should not be conducted for HCW who have facial hair (e.g., a beard that prevents the proper fitting of the N95). **In addition, wearers must be clean-shaven to get a proper fit with a respirator. See attachment 7.1**
- 4.3 The trainer should explain the -fit test steps verbally at the beginning of the session
- 4.4 The trainer should -fill out the required forms that include the following:
 - 4.4.1 Medical Assessment form before the test. See attachment 7.2
 - 4.4.2 Fit test completion form for qualitative -fit test only. See attachment 7.3
- 4.5 A medical clearance before -fit testing is required if an employee reports: respiratory or cardiac problems, or inability or reduced ability to taste or smell.
- 4.6 The trainer should teach participants the correct methods for putting on and taking off the N95 respirator before the test.
- 4.7 Types of Fit tests:
 - 4.7.1 Qualitative Respirator Fit Test: Contents of Qualitative -fit test Kit (see attachment 7.4). Procedure: 2 parts (Sensitivity & Fit test)
 - 4.7.1.1 Sensitivity Test : Don't forget to test the nebulizer for working before starting.
 - 4.7.1.1.1 Confirm that the participant does not eat, drink (except water), smoke or chew gum for 15 minutes before the test.
 - 4.7.1.1.2 Ask the test person to put the hood on and collar assembly without a respirator
 - 4.7.1.1.3 Ask the participant to breathe through his/her mouth with tongue extended and remind him throughout.
 - 4.7.1.1.4 Use Nebulizer 1# with Sensitivity Test Solution, after that inject the aerosol into the hood through the hole in the hood window.
 - 4.7.1.1.5 The nebulizer should be held in an upright position with the nozzle directed away from the mouth and nose of the test person. Inject ten squeezes of the bulb. Squeezes should be done deeply and slowly.
 - 4.7.1.1.6 Ask the participant to report at any time during the test if he/she can detect the sweet taste of the solution and remind him during the procedure.
 - 4.7.1.1.7 The trainer should note the number of squeezes as 10, once the test person reports the taste regardless of no. of squeezes (1-10).
 - 4.7.1.1.8 Inject an additional shot of 10 squeezes of the aerosol into the hood If not tasted in step 1, and noted as 20 once the test person reports the taste regardless of no. of squeezes (11-20).
 - 4.7.1.1.9 If still not tasted, the trainer should inject an additional 10 squeezes, and he should be noted as 30 once the test person reports the taste regardless of no. of squeezes (21-30).
 - 4.7.1.1.10 Write the results of the sensitivity test as no. of squeezes required for the participant to detect the taste as 10,20, or 30. (see attachment 7.5)
 - 4.7.1.1.11 Remove the test hood and give the test person instructions to rinse his/her mouth with water and wipe his/her face and wait for a few minutes to clear the taste from his/her mouth.
 - 4.7.1.2 Fit testing
 - 4.7.1.2.1 Ask the participant to don the respirator and perform a user seal check.

- 4.7.1.2.2 Ask the participant to put the hood on and position the test hood and breathe through his/her mouth with tongue extended and remind him occasionally during the procedure.
- 4.7.1.2.3 The test should be done in an upright position.
- 4.7.1.2.4 The trainer should use a stopwatch to regulate the time required for each activity and time for additional squeezes.
- 4.7.1.2.5 The trainer should use Nebulizer 2# with Fit Test Solution; and he should inject the -fit test aerosol using the same number of squeezes as required in the Sensitivity Test (20 ,10, or 30). A minimum of ten squeezes is required (see attachment 7.6)
- 4.7.1.2.6 The trainer should fully collapse and allow the bulb to expand fully on each squeeze.
- 4.7.1.2.7 The nebulizer must be held in an upright position to ensure aerosol generation with the nozzle directed away from the mouth and nose of the test person.
- 4.7.1.2.8 The trainer should inject one-half the number of squeezes (10 ,5, or 15) every 30 seconds for the duration of the -fit test procedure.
- 4.7.1.2.9 The trainer should ask the participant to report at any time during the test if he/she can detect the sweet taste of the solution and remind him occasionally during the procedure.
- 4.7.1.2.10 The trainer should approve the type of tested respirator when all exercises are done without the participant detecting the sweet taste of the aerosol.
- 4.7.1.2.11 After the initial injection of aerosol, the trainer instructs the test person to do the following test exercises for 60 seconds each
 - 4.7.1.2.11.1 Normal breathing
 - 4.7.1.2.11.2 Deep breathing
 - 4.7.1.2.11.3 Turning head side to side
 - 4.7.1.2.11.4 Moving head up and down
 - 4.7.1.2.11.5 Talking
 - 4.7.1.2.11.6 Bending over
 - 4.7.1.2.11.7 Normal breathing
- 4.7.1.3 Retest
 - 4.7.1.3.1 The test should be terminated at any time when the sweet taste of aerosol is detected by the test person.
 - 4.7.1.3.2 Wait 15 minutes, and ask the participant to rinse mouth, face, and hands
 - 4.7.1.3.3 Repeat testing starting from Part 1 -Sensitivity Testing and using the same respirator after re-donning and readjusting.
 - 4.7.1.3.4 The trainer should repeat the test using a different size or model of a respirator if a second failure with the same respirator.
- 4.7.1.4 Recording: Document the results of the -t test for every employee and remind the health care worker to use only the size and model of the high particulate respirator that has been approved based on the -fit testing result
- 4.7.1.5 Cleaning:
 - 4.7.1.5.1 At the end of each session or at least every four hours, discard the unused solutions from the nebulizers.
 - 4.7.1.5.2 Rinse the nebulizers with warm water to prevent clogging and shake dry.
 - 4.7.1.5.3 Wipe out the inside of the hood with a damp cloth or paper towel with alcohol to remove any deposited test solution.
- 4.7.1.5 Duration of exercise and fit test.
 - 4.7.1.5.1 Each exercise lasts 60 seconds. There are 7 exercises in the -t test, so a properly administered fit test lasts a minimum of 7 minutes. Keep in

mind that the entire qualitative fit test procedure includes the sensitivity test, donning, and performing user seal checks – in addition to the fit test itself – so the entire event will require at least 15 minutes of each subject's time.

- 4.7.2 Quantitative Respirator Fit Test: General steps to be followed during the Quantitative Respirator Fit Test:
 - 4.7.2.1 Connect the parts of the equipment correctly according to the manufacturer's recommendations.
 - 4.7.2.2 Perform the daily check of the equipment in a logbook.
 - 4.7.2.3 Enter the new personal and respirator data on the system.
 - 4.7.2.4 Prepare the tested respirator correctly
 - 4.7.2.5 Perform the testing process and follow up on all test steps.
 - 4.7.2.6 Follow the machine's instructions and observe the participant throughout all exercises
 - 4.7.2.7 Always refer to the manufacturer's instructions regarding the operation and daily check, maintenance, and troubleshooting.

5. MATERIALS AND EQUIPMENT:

5.1 Forms and Records:

5.1.1 N/A

5.2 Materials and Equipment

5.2.1 N/A

6. RESPONSIBILITIES:

- 6.1 It is the responsibility of the Infection prevention and Control Staff to implement this policy.
- 6.2 Health Care Workers








7. APPENDICES:

- 7.1 Facial Hairstyles and Filtering Facepiece Respirators.
- 7.2 Medical Assessment form before the test.
- 7.3 Fit test completion form for qualitative -fit test only.
- 7.4 Contents of Qualitative -t test Kit
- 7.5 Reporting instructions for the results of the sensitivity and -fit test
- 7.6 Qualitative -fit test exercise

8. REFERENCES:

- 8.1 General Directorate of Infection Prevention and Control in Healthcare Facilities (GDIPC) Basic Infection Control Skills License (BICSL) Manual. 2024 Version 3.0 <https://jed-s3.bluvault.com/psj1-ifn-s3-ifn01/files/08/Basic%20Infection%20Control%20Skills%20License%20%28BICSL%20Version%203.0-2024.pdf>
- 8.2 Basic Infection Control Skills License (BICSL) Manual – February 2025 Version 3.0
- 8.3 Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) Standards 3rd Edition. 1436-2015. Effective 1 January 2016.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Ms. Marilou C. Magallano	IPC Practitioner		March 03, 2025
Prepared by:	Ms. Wadha Mohd Al Shammari	IPC Practitioner		March 03, 2025
Reviewed by:	Ms. Awatif Hamoud Al Harbi	IPC Director		March 06, 2025
Reviewed by:	Mr. Sabah Turayhib Al - Harbi	Director of Nursing		March 09, 2025
Reviewed by:	Mr. Abdullellah Ayed Al Mutairi	QM&PS Director		March 11, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		March 13, 2025
Approved by:	Mr. Fahad Hazam Al - Shammary	Hospital Director & IPC Committee Chairman		March 16, 2025

Appendix 7.1 Facial Hairstyles and Filtering Facepiece Respirators.



Appendix 7.2 Medical Assessment form before the test.

Appendix 3: Fit test Medical Assessment Form

Name:		Date of Birth:	
Department:		Job Title:	

Screening Question	Yes	No	Details :Please Explain If Yes
1. Do you have a current medical problem that causes wheezing, constant runny nose, or repeated cough (examples :asthma COPD , chronic bronchitis ,severe allergies)?			
2. Do you have a rash on your face or any skin condition likely to be aggravated or irritated by a mask rubbing on it?			
3. Do you have a facial deformity, past major surgery to the face, or an unusually small jaw? (These factors may make fitting a mask more difficult.)			
4. Have you worn a respirator before? If so, have you experienced problems wearing a respirator? (Please describe to the right.)			
5. Do you have a beard? If so, please indicate to the right if you would be willing to shave it off? (Men only – women should just check, ON, for screening purposes)			
6. Are you being treated for a breathing disorder or lung disease? (If so, specify medication.)			
7. Is there any medical reason why you think that it would be difficult or impossible for you to wear an N95 respirator on the job?			

Signature:

Date:

Appendix 7.3 Fit test completion form for qualitative -fit test only.

Appendix 10: Fit Test Form

Respiratory type:		Model :		Size:	
Testing agent:	<input type="checkbox"/> Sweet <input type="checkbox"/> Bitrex	Sensitivity test squeezes :			

Exercise	Fit	Taste Detected
Normal breathing.		
Deep breathing.		
Turning head side to side.		
Nodding head up and down.		
Jogging in place		
Talking The Rainbow Passage.		
Normal breathing.		

The tested healthcare worker should be cleanly shaved.

Tested by:	Signature	Date tested:

Employee signature: Date.....

Appendix 7.4 Contents of Qualitative -fit test Kit

a) Contents of Qualitative fit test Kit (see Figure 20):

1. One Hood
2. One Collar Assembly
3. Nebulizer 1# (Sensitivity)
4. Nebulizer 2# (Fit Test)
5. Two Sets Replacement
6. Nebulizer Inserts
7. Sensitivity Solution (1#)
8. Fit Test Solution (2#)



Figure 20: Qualitative fit test Kit (3M, 2021a)

Appendix 7.5 Reporting instructions for the results of the sensitivity and -fit test(see attachment 7.5)

Sensitivity test	Fit test	
Number of Squeezes Needed in Part 1	Number of Squeezes for Initial Dose	Number of Squeezes for a Replenishing Dose Every 30 Seconds
1-10	10	5
11-20	20	10
21-30	30	15

Appendix 7.6 Qualitative -fit test exercise

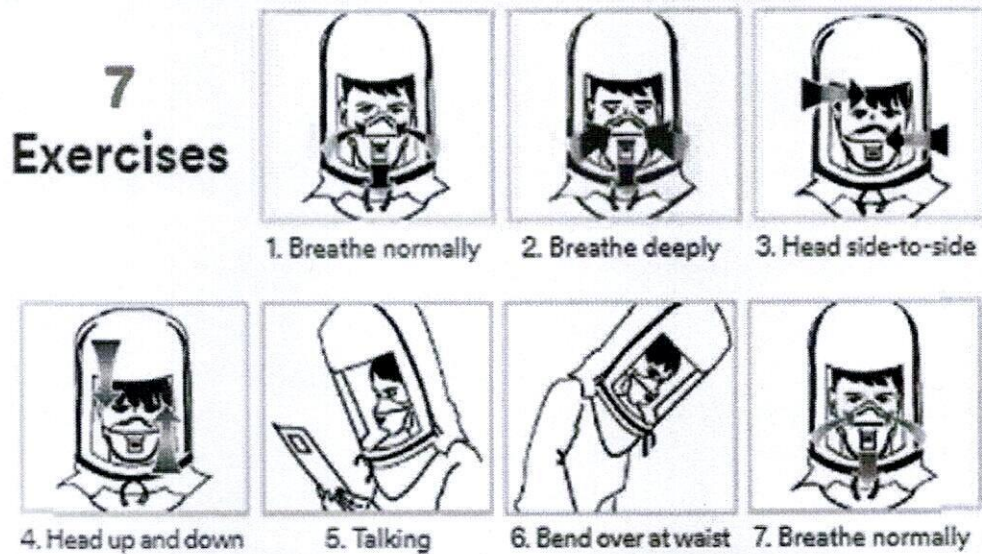


Figure 21: Qualitative fit test exercises (3M, 2019).