



THE UNIVERSITY OF ALABAMA®

WHERE LEGENDS ARE MADE®

# Environmental Health and Safety

Health Care

Respirator Protection Training



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# Medical Reasons That **Could** Prohibit the Use of a Respirator

- A history of pulmonary or lung problems such as:
- Asbestosis, asthma, COPD, emphysema, TB, silicosis, shortness of breath, etc.
- Do not use a respirator if you have any health or respiratory problem until you obtain clearance from a Physician or other Licensed Health Care Professional.



# Other Reasons Not to use a Respirator

- Beards, stubble, or sideburns will prevent a good facepiece seal. **Do not** use any respirator unless you are clean-shaven.
- **No** exception to this rule
- If you have facial hair you will **not** be fit tested



# Who uses respirators?

- An estimated 5 million workers are required to wear respirators in 1.3 million workplaces throughout the United States. Respirators protect workers against insufficient oxygen environments, harmful dusts, fogs, smokes, mists, gases, vapors, sprays and biological hazards. These hazards may cause cancer, lung impairment, other diseases, or death.



# If Worn Properly

- An air purifying respirator will reduce, but not eliminate the inhalation of contaminants.
- Does not supply oxygen.
- Does not totally eliminate exposure to or risk of contracting any disease or infection.



# Selection of Respirators

- Employer must select and provide an appropriate respirator based on the respiratory hazards to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.



# Your Respirator

- In most Health Care settings the N95 Health Care Particulate Respirator and Surgical Mask or equivalent is used; sometimes in conjunction with a faceshield, safety glasses or hood.





# N95 Particulate Respirator

- The N designation means the respirator is designed to be used to filter aerosols free of oil.
- Has a filter efficiency level of 95% or greater against particulate aerosols free of oil.



# N95 Particulate Respirator

- Intended to reduce wearer exposure to certain airborne particles in a size range of 0.1 to >10.0 microns
- Fluid resistant to splash and splatter



# Prior to use

- A written respiratory program must be implemented
- User must be medically fit to use a respirator
- Have had adequate training for the hazard they are to be subjected to
- Must be trained in the use of intended respirator
- Must be fit tested



# Prior to donning respirator

- Select the appropriate size. Only a secure snug fit protects you, so make sure you have the correct size. The shape of your face, facial hair and condition of your skin can affect your fit.
- Inspect the respirator for defects.
- Stretch the elastic straps slightly



# A properly donned disposable N95 filtering facepiece respirator.

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- To be properly donned, the respirator must be correctly oriented on the face and held in position with both straps. The straps must be correctly placed, with the upper strap high on the head and the lower strap below the ears. For persons with long hair, the lower strap should be placed under (not over) the hair. The nose clip must be tightened to avoid gaps between the respirator and the skin. Facial hair should be removed before donning.



# RESPIRATOR FIT CHECKS

- Perform **both** a *Positive Pressure Seal Check* and a *Negative Pressure Seal Check*

## Positive Pressure Seal Check:

With the respirator securely in place exhale greatly. The respirator will bulge slightly.

If air leaks between the face and the face-seal of the respirator, reposition it and readjust the nose clip for a more secure seal.



# RESPIRATOR FIT CHECKS

## Negative Pressure Seal Check:

With the respirator securely in place inhale greatly. The respirator will collapse slightly. If air leaks between the face and the face-seal of the respirator, reposition it and readjust the nose clip for a more secure seal.



# Fit Test

- A qualitative fit test (yes it fits or no it does not fit) is used.
- Dependent on the detection of a saccharin (sweet) tasting mist.





# What is done?

## **Sensitivity Test**

This test is done to assure that the person being tested can detect the sweet taste of the test solution at very low levels. The Sensitivity Test Solution is a very dilute version of the Fit Test Solution. The test subject should not eat, drink, or chew gum for 15 minutes before the test.



# Sensitivity Test

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- The test hood is placed over the subject's head (without the respirator on) and the sensitivity solution is misted inside to make sure the subject can detect the test solution.



# Next

- The subject dons the respirator, the hood is again placed over the head and the Fit Test Solution (a very concentrated saccharin solution) is misted into the hood.



# And Last

- The subject is asked to perform several exercises, normal breathing, deep breathing, turning their head side to side and up and down. Finally they are asked to read the “Rainbow Passage”. If the test solution is not detected during these exercises the subject has a properly fitted respirator.

