

Purpose

The purpose of this program is to provide optimal respiratory protection to all employees that may come into contact with an airborne particulate that may cause serious injury, illness, or death. This program will outline the required materials, training, fit testing, respiratory use, and up keep of the respirators. The Respiratory Protection Program will meet all compliance with OSHA regulations 29 CFR 1910.134.

Definitions

Program Administrator- Person in charge of implementing and maintaining the Respiratory Protection Program.

Risk and Safety- Person in charge of coordinating all medical aspects and screening for the Respiratory Protection Program.

Affected Employees- Any employee that may be placed in a circumstance where use of a respirator is permitted.

IDLH- Immediate Danger to Life or Health.

Qualified Instructor- Employees identified and trained on OSHA 29CFR 1910.134 guidelines, the Agency Respiratory Protection Program, and all respirators in use at the Agency.

Critical Failure- Event in which an employee's respirator fails to operate properly and puts the employee's health and/or life at risk

Program Administrator

Risk and Safety will be designated as the Program Administrator for the Respiratory Protection Program. The responsibilities of the Program Administrator will be as listed below:

- Review sanitation/ storage procedures
- Perform periodic audits to ensure respirators are properly stored, inspected, and maintained
- Monitor compliance for this program
- Provide training for *affected employees*
- Provide initial and annual respirator fit testing

The Program Administrator does not need to be physically present for all of these duties, but must ensure their completion. Many of the duties may be delegated to other trained employees.

Risk and Safety

The Safety Office will be responsible for coordinating all medical aspects of the Respiratory Protection Program to include:

- Pre-screening survey
- Guidance for further medical evaluation, if needed

Personal Protective Equipment

- Exposure control program and guidance

Record Keeping

The Agency will keep written records regarding all training, fit testing, medical evaluations, and exposures. This information will facilitate employee involvement in the respirator program, assist in auditing the adequacy of the program, and provide a record for compliance to OSHA standard 29 CFR 1910.134. The Agency has established a record of the fit test administered to employees including:

- The name or badge number of the employee tested
- Type or fit test performed
- Specific make, model, style, and size of respirator tested
- Date of test
- Pass/Fail results

Equipment

Each affected employee will fit test on one of several types of available N95 masks. When an employee fails to fit test wearing an N95 mask, the employee will be fit for a half-faced filtered mask.

The N95 surgical mask is a disposable mask to be used when there is a possibility of infectious disease being spread by airborne particles. This is primarily used when tuberculosis is suspected but is not limited to such.

NOTE: Employees on Designated Operations Teams such as SWAT, may use full faced respirators during those operations. Fit testing and mask use will be at the direction of the lead facility for these employees during that time. The employees are expected to use the respirator provided to them by the Agency when working directly for the Agency.

Training

Training will take place for all employees that may come into contact with patients. Training must be comprehensive, understandable, and recur annually. If needed, more training will occur throughout the year. A qualified instructor will provide training and upon completion of training, require Affected Employees to demonstrate their knowledge of the following:

- Overview of Respiratory Protection Program/ Respirator Use Policy
- OSHA regulations for respirator use
- Agency requirements
- Medical screening requirements
- Understanding of the respirator
- Fit test exercises
- Respirator inspection
- Respirator fit check
- Emergencies and adaptation
- Why the respirator is necessary
- How improper fit, usage, and maintenance can be detrimental to the employee

Personal Protective Equipment

- When to use the respirator
- How to maintain and store the respirator
- How to use the respirator in emergency situations (i.e.- respirator malfunction)
- Limitations and capabilities of the respirator
- How to inspect, don, and remove the respirator
- How to recognize medical signs and symptoms that may limit or prevent the effective use of the respirator

Retraining will be conducted annually and when:

- A change has been made to the Respiratory Protection Program
- A trend presents in an employee failure to properly use either respirator
- Other situation arises in which retraining appears necessary to ensure safe respirator use
- A change in weight or physical aspect of the face is noted. These changes could be, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

Fit Testing

A qualitative fit test (QLFT) using Bitrex will be done on every affected employee prior to respirator use. The fit test procedures are as follows:

Threshold Test

- This is done to determine the candidates ability to recognize the taste of Bitrex
- This will be performed without wearing a respirator, however, the enclosure hood will be worn
- The candidate will don the hood enclosure. During the threshold screening the candidate will breathe in and out through their slightly opened mouth. The candidate will report when they taste the Bitrex
- The solution is then placed in the bulb pump nebulizer
- The nebulizer is then squeezed into the hood in increments of ten (10) squeezes
- This is done until the candidate tastes the Bitrex or until a maximum of thirty (30) squeezes is met
- If a taste response is elicited then the candidate will be asked to note the taste of the Bitrex. The number of squeezes required to elicit taste will be taken note and will be used for each exercise during the fit test
- If no taste response is noted, then the candidate may not perform the Bitrex fit test

Fit Test

- The candidate may not eat, drink (except plain water), smoke, or chew gum 15 minutes prior to fit test administration
- The candidate will appropriately don the respirator and have the enclosure hood placed over their head; this is the same enclosure hood used in the threshold test

Personal Protective Equipment

- As done in the threshold test, the candidate will be asked to breath in and out through their mouth
- The nebulizer will be placed into the front of the enclosure and will be squeezed the appropriate number of times to elicit a taste response (determined during the threshold test)
- After generating the aerosol, the candidate will be asked to perform the following tasks for one minute each:
 - o Normal breathing: In a normal standing position, without talking, the subject shall breathe normally.
 - o Deep breathing: In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.
 - o Turning head side to side: Standing in place, the subject shall slowly turn his/her head side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
 - o Moving head up and down: Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
 - o Talking: The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.
 - o Bending over: The subject shall bend at the waist as if he/she were to touch his/her toes.
 - o Normal breathing: In a normal standing position, without talking, the subject shall breathe normally.
- Every thirty seconds the aerosol concentration will be replenished using one half the number of squeezes as initially done
- The candidate will inform the administrator if the taste of Bitrex is detected. If no taste is elicited then the test is successfully passed
- If the taste of Bitrex is elicited then the test is a failure. A different respirator shall be tried and the entire test procedure is repeated
- After completing each of the exercises, the test administrator will question the employee on the comfort of the respirator. If the employee states that this is unacceptable, then Medic must ensure the fit test is repeated using a different model respirator

Basic Respiratory Protection Safety Procedures

1. Only authorized and trained employees will be allowed to use respirators. Those employees will only be allowed to use the respirator in which they have been trained on.
2. Only medically cleared and qualified employees will be allowed to use the respirator. Any changes to the employee's health or condition will be reported to the safety office. The safety office will then ensure that the employee has proper medical clearance.
3. All respirators will be kept in a clean, convenient, and sanitary location.

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4. Risk and Safety will establish and maintain surveillance of all jobs and work done. Appropriate adjustments will be made as job duties change.
5. Each emergency event (respiratory failure), will be investigated for root cause and possible education for prevention.
6. Risk and Safety will establish and maintain safe operational procedures for the safe use of the respirator, with strict enforcement by department supervisors to include disciplinary action for failure to follow all general and specific safety rules.

Identification and Maintenance

All filters, if applicable, will be labeled and color coded with the proper NIOSH approved label. The N95 does not have an expiration date; however, all N95 respirator stock will be assessed quarterly for degradation and structural integrity.

Respirator Replacement

Under normal conditions, after each use, the N95 will be disposed of appropriately. This will be done with proper removal procedure, taught during training. Replacement N95 respirators are on all Medic units.

Replacement of N95 respirators will commence if/when it presents with damage and unsanitary conditions. If any damage is noted that could compromise structural and functional integrity, then the respirator will be replaced.

Respiratory Protection Schedule by Job and Working Condition

Medic maintains a Respiratory Protection Schedule by job and working condition. This schedule is provided, during training and upon request, to every employee that will use a respirator at any time. This schedule provides the following information:

- Job title
- Working conditions
- Working location
- Potential hazards

The schedule can be found in *Appendix A* of this program. This schedule is reviewed annually and adjusted for any changes that may arise.

Physical and Medical Qualifications

NOTE: Any current employee who is unable to pass the medical evaluation will work with HR to determine next steps.

Medical Evaluation

A medical evaluation is required for anyone who will be wearing a respirator. This medical evaluation must be cleared prior to the employee being fit tested or wearing a respirator. The Agency upholds a two-tiered system for medical clearance. The first tier is completing the Respirator Medical Questionnaire. The questionnaire has health specific questions on it that may lead to an understanding of who may or may not be at risk for health issues when using a respirator. The second tier is a medical examination (if deemed necessary by the reviewing Physician). The medical examination shall include any medical test, procedures, or

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consultations that the Physician deems necessary to make a final decision. Once medical clearance is obtained, the employee may undergo fit testing for respirator use. The Agency will cover all cost associated with medical clearance for respirator use.

Follow-up

Any changes in the employees' health will be reported to Risk and Safety. If these changes require further medical evaluation for respirator use clearance, then it will be scheduled as quickly as possible.

Supplemental Information for the Physician

The following information will be provided to the Physician prior to any the Physician making any determination on the employee's ability to use a respirator:

- Type and weight of the respirator(s) to be used
- Duration and frequency in which the respirator(s) may be used
- The expected physical work effort
- Additional protective clothing that may be worn
- Temperature and humidity extremes that may be encountered
- Copy of the Mecklenburg EMS Agency Respiratory Protection Plan

Medical Determination

Once the physician has cleared the employee, the safety office will obtain a written recommendation from the Physician. The recommendation shall provide only the following information:

- Any limitations on use of any of the respirators, related to the medical condition of the employee or relating to workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator
- The need, if any, for follow up medical evaluations

Respirator Operation and Use

The respirator(s) will only be used within parameters of this Respiratory Protection Program.

For continued protection of respirator users, the following general use rules apply:

- Users shall never remove the respirator while in a hazardous environment
- Respirators are to be stored in sealed containers out of harmful atmospheres
- Store respirators away from heat and moisture
- Store respirators such that the sealing area does not become warped or distorted

Agency requirements

The Agency does not permit the wearing of a respirator if:

- Facial hair comes between the sealing surface of the face piece and the face that interferes with valve function
- Any condition that interferes with the face-to-face piece seal or valve function

Personal Protective Equipment

- If glasses are worn in a manner that interferes with the integrity of the seal of the respirator

Cleaning and Disinfecting

N95 Respirators are disposable and will come in a sealed container. Medic will always provide new N95 respirators that have been sealed. After each use the N95 will be disposed of via biohazard waste.

Respirator Inspection

Respirators shall be inspected as follows:

- All respirators used in routine situations shall be inspected before each use