

**Applies to:** (examples; Faculty, Staff, Students, etc)

Faculty , Staff , Students

**Policy Overview:**

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It is the policy of the University of Health Sciences and Pharmacy in St. Louis to provide its employees with a safe and healthful work environment. The guidelines in the respiratory protection program are designed to help reduce employee exposure against occupational dusts, fumes, mists, biological, radionuclides, gases and vapors. The primary objective is to prevent excessive exposure to these contaminants. This is accomplished as far as feasible by accepted engineering and work practice control measures. When effective engineering controls are not feasible, or while they are being implemented or evaluated, respiratory protection may be required to achieve this goal. In these situations, respiratory protection, training and medical evaluations are provided at no cost to the employees.

**Definitions:**

Term	Definition
Fit test	Means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.
High efficiency particulate air (HEPA) filter	Means a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.
Immediately Dangerous to Life and Health (IDLH)	(IDLH) is defined by the US National Institute for Occupational Safety and Health (NIOSH) as exposure to airborne contaminants that is "likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment.
Positive Air Purifying respirator	PAPR- means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.
Qualitative fit test (QLFT)	Means a pass/fail fit test to assess the adequacy of a respirator fit that relies on the individual's response to the test agent.
Quantitative fit test (QNFT)	Means an assessment of the adequacy of a respiratory fit by numerically measuring the amount of leakage into the respirator.
Self-contained breathing apparatus (SCBA)	Means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.
Negative Air Purifying respirator	A negative pressure respirator refers to any tight-fitting respirator in which the air pressure inside the face mask is negative during inhalation with respect to air pressure outside the respirator.
Program Administrator	The program administration is the individual who oversees the respiratory protection program. UHSP has assigned this role to the Emergency Management Coordinator.
Program Participant	An individual covered under this policy whose position has sufficient risk under the Hazard Assessment to require use of a respirator.

## Details:

### 1. Purpose

- a. The purpose of this respirator program is to establish standard operating procedures to ensure the protection of all program participants from respiratory hazards through proper selection and use of respirators. This program applies to all program participants who are required to wear respirators during normal operations, non-routine tasks, or emergency operations such as a spill of a hazardous substance.

## Procedures:

### 1. Responsibilities

#### a. Program Administrator Duties

- i. University of Health Sciences and Pharmacy in St. Louis has designated the Emergency Management Coordinator as the program administrator to oversee the respiratory protection program. Duties of the program administrator include:
  - i. Identifying work areas, processes or tasks that require workers to wear respirators, and evaluating hazards
  - ii. Selection of respiratory protection options
  - iii. Monitoring respirator use to ensure that respirators are used in accordance with their certifications
  - iv. Arranging for and/or conducting training
  - v. Ensuring proper storage and maintenance of respiratory protection equipment
  - vi. Conducting or arranging for fit testing
  - vii. Administering the medical surveillance program
  - viii. Maintaining records required by the program
  - ix. Evaluating the program
  - x. Updating written program as needed

#### b. Supervisor Duties

- i. Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the program participants under their charge. Duties of the supervisor include:
  - i. Ensuring that program participants under their supervision (including new hires) have received appropriate training, fit testing, and medical evaluation
  - ii. Ensuring the availability of appropriate respirators and accessories
  - iii. Being aware of tasks requiring the use of respiratory protection
  - iv. Enforcing the proper use of respiratory protection when necessary
  - v. Ensuring that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan
  - vi. Ensuring that respirators fit well and do not cause discomfort
  - vii. Continually monitoring work areas and operations to identify respiratory hazards
  - viii. Coordinating with the program administrator on how to address respiratory hazards or other concerns regarding the program

#### c. Program Participants' Duties

- i. Each employee has the responsibility to wear his or her respirator when and where required and in the manner in which they were trained. Program participants must also:
  - i. Care for and maintain their respirators as instructed and store them in a clean sanitary location
  - ii. Inform their supervisor if the respirator no longer fits well, and request a new one that fits properly
  - iii. Inform their supervisor or the Program Administrator of any respiratory hazards that they feel may not be adequately addressed in the workplace and of any other concerns that they have regarding the program

### 2. Program Elements

#### a. Hazard Assessment

- i. The Program Administrator will conduct a hazard evaluation for each operation process, or work area where airborne contaminants may be present in routine operations or during an emergency. The hazard evaluation will include (see example 1):
  - i. Identification of the hazardous substances used in the workplace, department or work process;
  - ii. Review of work processes to determine where potential exposures to these hazardous substances may occur; and
  - iii. Exposure monitoring to quantify potential hazardous exposures.
- ii. The hazard evaluations will be evaluated by the Program Administrator with consultation from experts in airborne contaminants as necessary (such as an occupational health professional or health care provider trained to conduct health assessments for airborne contaminants and respirator fit testing). The results of the hazard evaluation are

maintained by the Program Administrator for employee review. The program administrator will revise and update the hazard assessment as needed (i.e., any time work process changes which may potentially affect exposure).

- iii. The Program Administrator will communicate with Human Resources regarding locations where the hazard assessment indicates that respirator use is required. Human Resources will track employees who have routine or potential emergency work in these areas. These individuals will be designated as program participants.

### 3. Respiratory Selection

- a. Respirators are selected on the basis of the hazards to which the program participants are exposed and in accordance with OSHA requirements. Only NIOSH certified respirators will be selected and used.

- i. General Requirements

- i. The employer shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.
    - ii. The employer shall select a NIOSH-certified respirator. The respirator shall be used in compliance with the conditions of its certification.
    - iii. The employer shall identify and evaluate the respiratory hazard(s) in the workplace; this evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Where the employer cannot identify or reasonably estimate the employee exposure, the employer shall consider the atmosphere to be IDLH.
    - iv. The employer shall select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

- b. Respirators for Immediately Dangerous to Life and Health (IDLH) atmospheres

- i. All oxygen-deficient atmospheres shall be considered IDLH. Exception: If the employer demonstrates that, under all foreseeable conditions, the oxygen concentration can be maintained within the ranges specified in Table II of this section [29 CFR 1910.134(d), i.e., for the altitudes set out in the table], then any atmosphere-supplying respirator may be used. UHSP does not allow program participants to work under any IDLH conditions.

- c. Respirators for atmospheres that are not IDLH

- i. The employer shall provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations, such as incidental spills and releases.

- a. NIOSH Certification

- i. All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while it is in use.

### 4. Voluntary Respirator Usage

- a. The University will provide (or allow employee-owned) respirators to program participants for voluntary usage for use against nuisance non-hazardous particulate (e.g., fiberglass, sheet rock dust, sawdust, dirt, pollen, animal dander).
- b. The Program Administrator will provide all program participants who voluntarily choose to wear either of the above respirators with a copy of 29 CFR 1910.134, Appendix D of the OSHA Standard. (Appendix D details the requirements for voluntary use of respirators by program participants.) Program participants choosing to wear an N-95 or a half face-piece air purifying respirators (APR) must comply with the procedures for medical evaluation, respirator use, and cleaning, maintenance and storage.
- c. The Program Administrator shall authorize voluntary use of respiratory protective equipment as requested by all other workers on a case-by-case basis, depending on specific workplace conditions and the results of the medical evaluations. The employee must also complete the voluntary use form and submit it to the Human Resources Office.

### 5. Medical Evaluation

- a. Program participants who are required to wear respirators must be medically evaluated before being permitted to wear a respirator on the job. Program participants are not permitted to wear respirators until a physician has determined that they are medically able to do so.
- b. A licensed health care professional will provide the medical evaluation to program participants. Human Resources, or designee, such as the Vice President, Operations, shall authorize medical evaluation of the completed form at an approved vendor such as:

- i. **Barnes Care Midtown**

5000 Manchester Ave St Louis, MO 63110  
Phone: (314) 747-5800 Fax:(314) 747-5866  
7:30 a.m.-6 p.m. Monday – Friday

- ii. **Concentra – Midtown**

6542 Manchester Ave St. Louis, MO 63139 Phone: (314) 647-0081 8 a.m.-5 p.m. Monday – Friday

- c. The medical evaluation procedures are as follows:

- i. The medical evaluation will be conducted using medical questionnaire provided in Appendix C of 29 CFR 1910.134 Respiratory Protection Standard. Barnes Care or Concentra will provide a copy of this questionnaire to all employees requiring medical evaluation.
            - ii. To the extent feasible, the company will assist program participants who are unable to read the questionnaire. When this is not possible the employee will be sent directly to the health care professional for assistance and medical evaluation.
            - iii. All affected program participants will be given a copy of the medical questionnaire to fill out, along with a stamped and addressed envelope for mailing the questionnaire to the health care professional. Program participants will be permitted to fill out the questionnaire on company time.

- iv. Follow up medical exams will be provided to program participants as required by the OSHA standard, and/or as deemed necessary by the health care professional.
  - v. All program participants will be allowed the opportunity to speak with the health care professional about their medical evaluation if they so request.
  - vi. The program administrator will provide the health care professional with a copy of this program and a copy of OSHA's respiratory protection standard. For each employee requiring evaluation, the health care professional will be provided with information regarding the employee's work area or job title, proposed respirator type and weight, length of time required to wear the respirator, expected physical work load (light, moderate, or heavy), potential temperature and humidity extremes, and any additional protective clothing required.
  - vii. After an employee has received clearance to wear a respirator, additional medical evaluations will be provided under any of the following circumstances:
    - i. The employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing;
    - ii. The health care professional or supervisor informs the Program Administrator that the program participants needs to be reevaluated;
    - iii. Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation; and
    - iv. A change occurs in workplace conditions that may result in an increased physiological burden on the employee.
  - d. NOTE: All examinations and questionnaires are to remain confidential between the employee and the physician.
6. Failure/Refusal to complete medical exam /use respirator/ participate in program
- a. Program participants who have been deemed to be covered under the respiratory program must follow program guidelines. Failure to follow program guidelines such as completing a medical exam, getting respirator fit tested, following respirator use policies and procedures, can result in disciplinary action, removal from the position, and/or separation. Employees who refuse to follow program guidelines will not be allowed to work.
  - b. Should the employee be unable to participate for a medical reason, the University will make a reasonable attempt to transfer the employee to another position for which there is a vacancy and the individual is qualified, but this cannot be guaranteed. Employees seeking a disability accommodation under ADA should contact Human Resources.
7. Fit Testing Procedures
- a. Barnes Care or Concentra will ensure that fit-test will be administered using an OSHA-accepted qualitative fit test (QLFT) or quantitative fit test (QNFT) protocol. The OSHA-accepted QLFT and QNFT protocols are contained in Appendix A of the OSHA Respiratory Standard (1910.134).
  - b. UHSP requires program participants to be fit tested at the following times and with the same make, model, style, and size of respirator that they will be using.
    - i. Before being allowed to wear any respirator with a tight-fitting face piece and at least annually thereafter;
    - ii. Whenever a different respirator face piece (size, style, model, or make) is used;
    - iii. Whenever visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight; and
    - iv. Upon employee notification that the fit of the respirator is unacceptable.
  - c. The Emergency Management Coordinator will maintain a record of the fit tests administered to program participants including (see example 2):
    - i. The name or identification of the employee tested;
    - ii. Type of fit test performed;
    - iii. Specific make, model, style, and size of respirator tested;
    - iv. Date of test; and
    - v. The pass/fail results
8. Use of Respirators
- a. General Use Procedures
    - i. Program participants will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or its manufacturer.
    - ii. All program participants shall conduct user seal checks each time that they wear their respirator. Program participants shall use either the positive or negative pressure check (depending on which test works best for them) specified in Appendix B-1 of the OSHA Respiratory Protection Standard.
    - iii. All program participants shall be permitted to leave the work area to maintain their respirator for the following reasons:
      - i. To clean their respirator if the respirator is impeding their ability to work, change filters or cartridges, replace parts, or to inspect respirator if it stops functioning as intended.
    - iv. Program participants should notify their supervisor before leaving the area.
    - v. Program participants are not permitted to wear tight fitting respirators if they have any condition, such as facial hair, facial scars, or missing dentures that prevents them from achieving a good seal. Program participants are not permitted to wear headphones, jewelry, or other articles that may interfere with the face piece to face seal.
  - b. Emergency Procedures
    - i. The following work areas have been identified as having potential emergencies that are considered incidental spills or releases:

- i. Teaching and research laboratories on campus
  - ii. Solvent storage areas on campus
  - iii. Facilities areas on campus
- c. Immediately Dangerous to Life or Health (IDLH) Procedures
  - i. The Program Administrator has identified the following area(s) as presenting the potential for IDLH conditions: None listed because program participants at UHSP are not permitted to work in IDLH conditions.
- d. Respirator Malfunction
  - i. For any malfunction of a respirator (e.g., such a breakthrough, face piece leakage, or improperly working valve), the respirator wearer should inform his or her supervisor that the respirator no longer functions as intended, and go to a safe area to maintain the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator, or is provided with a new respirator.
- e. Maintenance and Care Procedures
  - i. In order to ensure continuing protection from the respirators being use, it is necessary to establish and implement proper maintenance and care procedures and schedules. A lax attitude toward maintenance and care will negate successful selection and fit because the devices will not deliver the assumed protection unless they are kept in good working order.
  - ii. Cleaning and Disinfecting
    - i. The University provides each respirator user with a respirator that is clean, sanitary, and in good working order. We ensure that respirators are cleaned and disinfected at least weekly or as often as necessary to be maintained in a sanitary condition. Respirators are cleaned and disinfected using the procedures specified in Appendix B-2 of the OSHA Standard or manufacturer's recommendations.
    - ii. Respirators are cleaned and disinfected:
      - i. As often as necessary when issued for the exclusive use of one employee;
      - ii. Before being worn by different individuals;
      - iii. After each use for emergency use respirators; and
      - iv. After each use for respirators used for fit testing and training.
  - iii. Storage
    - i. Storage of respirators must be done properly to ensure that the equipment is protected and not subject to environmental conditions that may cause deterioration. We ensure that respirators are stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. They are packed and stored in accordance with any applicable manufacturer's instructions.
    - ii. Emergency respirators are stored:
      - i. To be accessible to the work area;
      - ii. In compartments marked as such; and
      - iii. In accordance with manufacturer's recommendations.
  - iv. iv. Respiratory Inspection
    - i. All respirators will be inspected after each use and at least monthly. Should any defects be noted, the respirators will be taken to the program administrator or supervisor. Damaged respirators will be either repaired or replaced.
    - ii. Respirators shall be inspected as follows:
      - i. All respirators used in routine situations shall be inspected before each use and during cleaning;
      - ii. All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with manufacturer's recommendations, and shall be checked for proper function before and after each use; and
      - iii. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.
    - iii. Respirator inspections shall include the following:
      - i. A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
      - ii. Check of elastomeric parts for pliability and signs of deterioration.
- f. The following checklist will be used when inspecting respirators:
  - i. Face piece:
    - i. cracks, tears, or holes
    - ii. facemask distortion
    - iii. cracked or loose lenses/face shield
  - ii. Head straps:
    - i. breaks or tears
    - ii. broken buckles
  - iii. Filters/Cartridges:
    - i. approval designation
    - ii. gaskets
    - iii. cracks or dents in housing
    - iv. proper cartridge for hazard
  - iv. Air Supply Systems:
    - i. breathing air quality/grade
    - ii. filter integrity

- iii. battery charge
- iv. condition of supply hoses
- v. hose connections
- vi. settings on regulators and valves

g. Respiratory Filter and Canister Replacement/Change Schedule

- i. An important part of the Respiratory Protection Program includes identifying the useful life of canisters and filters used on air purifying respirators. Each filter and canister shall be equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or
- ii. If there is no ESLI appropriate for conditions a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.
- iii. Cartridges/Filters shall be changed based on the most limiting factor below:
  - i. Prior to expiration date
  - ii. Manufacturer's recommendations for use and environment
  - iii. After each use
  - iv. When requested by employee
  - v. When restriction to air flow has occurred as evidenced by increased effort by user to breathe normally

9. Training

- a. Emergency Management Coordinator will be responsible to provide training to respirator training to respirator users or their supervisors on the contents of the Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection Standard. Workers will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to using a respirator in the workplace or prior to supervision of program participants that must wear respirators.
- b. The training will cover the following topics:
  - i. The UHSP Respiratory Protection Program
  - ii. The OSHA Respiratory Protection Standard
  - iii. Respiratory hazards encountered and their health effects
  - iv. Proper selection and use of respirators
  - v. Limitations of respirators
  - vi. Respirator donning and user seal (fit) checks
  - vii. Fit testing
  - viii. Emergency use procedures
  - ix. Maintenance and storage
  - x. Medical signs and symptoms limiting the effective use of respirators
- c. Program participants will be retrained annually or as needed (e.g., if they need to use a different respirator). Program participants must demonstrate their understanding of the topics covered in the training utilizing a hands-on exercise and a test demonstrating knowledge retention. Respirator training will be documented by the Program Administrator and the documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

10. Program Evaluation

- a. The program administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluation will include regular consultations with program participants who use respirators and their supervisors, site inspections, air monitoring and review of records.
- b. Identified problems will be noted and addressed by the Program Administrator. These findings will be reported to management, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementations of those corrections.

11. Documentation and Recordkeeping

- a. A written copy of this program and the OSHA standard is kept in the Program Administrator's office and is available to all program participants who wish to review it.
- b. Also maintained in the Program Administrator's office is an active log of program participants registered in the program, copies of trainings and fit test records. These records will be updated as new program participants are added or removed from the program, as new program participants are trained, as existing program participants receive refresher training and as new fit tests are conducted.
- c. Human Resources will also record employees who are covered under the scope of the respirator program. The Human Resources Office will maintain copies of the medical records for all employees covered under the respirator program. All information obtained through the health evaluation process will be kept confidential by Human Resources. However, information may be shared with appropriate UHSP leaders, as determined by the Director of Human Resources, with a legitimate business need to know.

**Responsibilities:**

Position/Office/Department	Responsibility
Emergency Management Coordinator	Serve as the Program Administrator for procedures of this policy

Supervisor	Ensure compliance and adherence to respirator protection program for employees with occupational exposure to respiratory hazards/irritants
Human Resources	Maintain copies of the medical records for all employees covered under the respirator program. All information obtained through the health evaluation process will be kept confidential by Human Resources

**Policy Contacts:**

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