

Standard Operational Procedure
OHP-SOP-004**Occupational Health Screening Procedure for Respiratory Protection****1. Purpose**

To establish a procedure to evaluate an individual's ability to wear respiratory protection safely and to protect an individual's health through screening aimed at early detection of occupational respiratory diseases. Occupational health screening is an essential part of the Concordia University's Respiratory Protection Program.

2. Scope

Respirators are worn to protect individuals from overexposure to harmful air contaminants. The use of respirators combined with wearing associated personal protective equipment (PPE) can pose a physiologic burden on individual employees, particularly in situations where heavy equipment is used and/or which impedes heat shedding. In order to further protect the health of employees, all individuals are required to be medically evaluated for their fitness to wear respirators with the associated PPE prior to assignment to work involving the use of respirators.

This procedure applies to all Members of the University Community in job positions that have been identified as having exposure or potential exposure to airborne contaminants that exceed legislated or consensus occupational exposure limits, as determined by Environmental Health and Safety.

This procedure applies for all Members of the University Community required to wear all types of respirators (air-purifying and atmospheric-supplying) during the course of their employment or studies, excluding emergency, redundant, and voluntary use of respirators.

This occupational health screening procedure is a component of the university's Respiratory Protection Program. In addition to complying with government regulations, this occupational health screening procedure establishes baseline data on employee respiratory health and provides a mechanism for early detection of occupationally induced respiratory disease and for early identification of respiratory problems which allows for appropriate interventions.

3. Definitions

Occupational exposure limits are based on the risk of eye irritation and **respiratory** effects associated with **exposure** to air contaminants that exceed legislated or consensus occupational exposure limits, as determined by Environmental Health and Safety.

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Airborne contaminant: A particle or dust which if inhaled, poses an inhalation hazard to the employee.

Respirator user: A member of the University Community that has been identified as having exposure or potential exposure to airborne contaminants that exceed legislated or consensus occupational exposure limits, as determined by Environmental Health and Safety.

University Sanctioned Activities: working, research, studying, working as an intern, and/or volunteering.

Members of the university community include:

- Employee - a person who under a contract of lease of personal service or contract of apprenticeship is hired to work full-time or part-time in a permanent or a temporary position at the University. Employees include faculty and staff.
- Student - an individual who has contracted with and is registered at the University for an academic purpose.
- Intern - Students performing an internship (with or without remuneration) for a company or an institution.

An Undergraduate, Graduate or Postgraduate student carrying work for the University is per definition, an employee.

4. Occupational Health Screening Requirements

- All Members of the University Community who occupy positions that been identified as having exposure or potential exposure to airborne contaminants that exceeds legislated or consensus occupational exposure limits will be enrolled in the Respiratory Protection Program, which includes Occupational Health Screening for Respiratory Protection.
- All Preferred Candidates who are applying for positions that have been identified as having exposure or potential exposure to airborne contaminants that exceeds legislated or consensus occupational exposure limits will complete Occupational Health Screening for Respiratory Protection.
- All individuals enrolled in the Respiratory Protection Program will complete the Occupational Health Screening for Respiratory Protection every 2 years throughout their employment.
- All individuals enrolled in the Respiratory Protection Program will complete a final Occupational Health Screening for Respiratory Protection upon retirement or termination of employment at the university.

4.1. Occupation Health Screening for Respiratory Protection

Occupational Health Screening for Respiratory Protection includes the following:

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- Completion of a Respirator Use Form (OHP-FORM-005)
- Completion of a Respirator User Medical Clearance Form (OHP-FORM-006)

Occupational Health Screening for Respiratory Protection may also include the following, as determined by the Occupational Health Physician:

- A pulmonary function test;
- A chest x-ray;
- Other medical investigations; or
- Referral to a medical specialist, if indicated.

A medical evaluation may be requested by the Occupational Health Physician after a prolonged absence for health reasons.

4.2. Respirator User Medical Clearance

Respirator User Medical Clearance is required in order to wear respiratory protection. The Respirator Use Form (OHP-FORM-005) and Respirator User Medical Clearance Form (OHS-FORM-006) are to be completed by every individual requiring enrollment in the Occupational Health Screening Program for Respirator Protection.

The Respirator Use Form (OHP-FORM-005) will be reviewed by the Manager, Industrial Hygiene and Prevention. The Respirator User Protection Medical Clearance Form (OHS-FORM-006) will be reviewed by the Occupational Health Physician. The Occupational Health Physician will determine if the individual is permitted to wear a respirator, if there are restrictions to respirator use, or if respirator use is prohibited.

Results of the evaluation will be communicated to the individual by the Manager, Industrial Hygiene & Prevention.

Supervisors will be notified of the respirator clearance results, including any work restrictions related to the use of respirators by the Manager, Industrial Hygiene & Prevention.

4.3. Medical Conditions That May Affect Respiratory Protection Medical Clearance

The ability of an individual to safely wear a respirator is dependent on the type of respiratory (workload) and will be affected by certain medical conditions.

All respirators increase the physiologic dead space of breathing, and adversely affect breathing effectiveness by decreasing effective tidal volume. Self-Contained Breathing Apparatuses are heavy (up to 10 kg) and increase cardiopulmonary and musculoskeletal strain because of the weight. Air purifying respirators that use filtering devices increase the work of breathing because of increased inspiratory resistance through the filter and increased expiratory resistance through the exhalation valve.

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Medical conditions that may adversely affect the use of respiratory protection include:

- Pulmonary disease (significant disease excludes the use of a respirator, mild to moderate disease might be permitted if the employee was reasonably comfortable with a respirator in past despite diminished lung function);
- Cardiovascular disease;
- Seizure disorders or poorly controlled diabetes;
- Facial palsy (may not permit a good seal or may not have tactile awareness of seal failure on affected side);
- Impaired olfactory senses (employee may be unable to detect seal failure in situations where substances are detectable by smell);
- Allergic rhinitis;
- Impaired range of motion or dexterity of upper extremities (unable to fit respirator).

Other factors that may adversely affect the use of respiratory protection include:

- Facial hair;
- Eye glasses;
- Prominent cheekbones, depressed cheeks or temples, abnormal chin (facial deformity may interfere with seal);
- Anxiety and claustrophobia; and
- Contact dermatitis from respirator material.

4.4. Respiratory Medical Clearance Results

Respirator medical clearance results will be communicated to the individual by the Manager, Industrial Hygiene & Prevention. At any time, the individual may request to see the Occupational Health Physician to review their medical clearance results. Such a request would be made to the Manager, Industrial Hygiene & Prevention.

As well, Supervisors will be notified of the respirator clearance results, including any work restrictions related to the use of respirators by the Manager, Industrial Hygiene & Prevention.

Environmental Health and Safety, in conjunction with the Occupational Health Physician, will analyze individual and aggregate data for early detection and trends of occupationally induced respiratory disease.

4.5. Occupation Health Screening for Respiratory Protection Recordkeeping

All documents related to an individual's Occupation Health Screening for Respiratory Protection will be maintained in the individual's occupational health file in Environmental Health & Safety, in accordance with the university's privacy policies and the Records Management Retention Rules.

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5. Roles and Responsibilities

In addition to the Roles and Responsibility stated in the Occupational Health Program Standard Operating Procedure OHP-DOC-001, the following roles and responsibilities also apply:

5.1. Individuals Requiring Enrollment in Occupational Health Screening Program for Respirator Protection

All individuals identified as requiring enrollment in the Occupational Health Screening Program for Respiratory Protection are responsible for:

- Adhering to the Occupational Health Screening Requirements described herein (Section 4);
- Complying with the requirements for the Respiratory Protection Program;
- Completing all required training before beginning to work in areas or completing tasks with exposure or potential exposure to airborne contaminants that exceeds legislated or consensus occupational exposure limits;
- Reporting any exposure, injury, near-miss, or illness that may be associated with exposure to airborne contaminants to their Supervisor, and submitting an Injury/Near-Miss Report Form (EHS-FORM-042) as soon as possible, as per the University's Policy on Injury Reporting and Investigation (VPS-42);
- Reporting to the Occupational Health Physician any medical or health condition or change in medical or health condition that could potentially affect their lung function; and
- Consulting with their family doctor, a family physician through Health Services, or the Occupational Health Physician regarding concerns related to exposure or potential exposure to airborne contaminants.

5.2. Supervisors and Principal Investigator

Supervisors and Principal Investigators are responsible for:

- Identifying individuals requiring enrollment in the Respiratory Protection Program, which includes Occupational Health Screening for Respiratory Protection;
- Complying with the requirements for the Respiratory Protection Program;
- Ensuring that all individuals under their responsibility have been informed about the potential risks of exposure or potential exposure to airborne contaminants that exceeds legislated or consensus occupational exposure limits;
- Ensuring Occupational Health Screening requirements are met for all individuals under their responsibility before allowing them to work in areas or completing tasks with an exposure or potential exposure to airborne contaminants that exceeds legislated or consensus occupational exposure limits;
- Ensuring all required training is completed before beginning to work in areas or completing tasks with an exposure or potential exposure to airborne contaminants that exceeds legislated or consensus occupational exposure limits;
- Providing all required personal protective equipment, including respirators, and safety equipment;

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- Reporting to the Occupational Health Program Coordinator, any medical or health condition or change in medical or health condition that individuals under their responsibility have self-identified that could potentially affect their ability to wear a respiratory. A medical recommendation from the Occupational Health Physician may be required; and
- Reporting any exposure, injury, near-miss, or illness that may be associated with exposure to airborne contaminants to the Occupational Health Program Coordinator, and submitting an Injury/Near-Miss Report Form (EHS-FORM-042) as soon as possible, as per the University's Policy on Injury Reporting and Investigation (VPS-42).

5.3. Environmental Health & Safety

Environmental Health & Safety is responsible for:

- Ensuring the services of an Occupational Health Physician are available for consultation, when required by the Manager, Industrial Hygiene & Prevention (EHS); or any individual enrolled or who will be enrolled in the Respiratory Protection Program, which includes Occupational Health Screening for Respiratory Protection; and
- Assuming the costs associated with Occupational Health Screening for Respiratory Protection.

5.4. Manager Industrial Hygiene and Prevention (EHS)

The Manager, IH and Prevention is responsible for:

- Managing the Respiratory Protection Program;
- Identifying potential airborne contaminants and evaluating exposure;
- Identifying job positions requiring enrollment into the Respiratory Protection Program; and
- Investigating cases of occupational respiratory diseases;
- Reviewing Respirator Use forms (OHP-FORM-005); and
- Communicating respirator medical clearance results including any work restrictions, to individuals and supervisors.

5.5. Occupational Health Physician

The Occupational Health Program Physician is responsible for:

- Determining the occupational health screening requirements for respiratory protection;
- Reviewing all Respirator User Medical Clearance forms (OHP-FORM-006) and determining respirator medical clearance;
- Communicating respirator medical clearance results to the Manager, Industrial Hygiene and Prevention; and
- Being available for consultation, when required, by the Manager, Industrial Hygiene and Prevention or any individual enrolled or who will be enrolled in the Respiratory Protection Program.

5.6 Occupational Health Program Coordinator (EHS)

The Occupational Health Program Coordinator is responsible for:

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- Coordinating the Occupational Health Screening Program for Respiratory Protection, in collaboration with the Manager, Industrial Hygiene & Prevention (EHS) and the Occupational Health Physician;
- In collaboration with the Manager, Industrial Hygiene & Prevention (EHS), responding promptly to any reported exposures, injuries, near-miss, or illness that may be associated with the exposure to noise exceeding 85dB; and
- Maintaining and preserving the confidentiality of all occupation health records.

6. Signature

This SOP requires the following approvals:

Pietro Gasparrini

June 1, 2017

Director

Environmental Health & Safety

Signature

Date

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