Provincial Health Services Authority
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Provincial Health Services Authority
Employee Wellness & Safety Program

PERSONAL PROTECTIVE EQUIPMENT PROGRAM

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1.0 INTRODUCTION

Personal protective equipment (PPE) creates a barrier against workplace hazards to reduce the risk of injury. PPE is not a substitute for eliminating hazards or for engineering controls, administrative controls or good work practices, but should be used in conjunction with these controls to ensure the health and safety of workers.

2.0 RESPONSIBILITIES

2.1 Supervisors

Managers and supervisors have primary responsibility for implementing the PPE Program in their work area. Managers and supervisors will:

- Ensure workplace hazard assessments are conducted to determine PPE requirements
- Provide appropriate PPE and make it available to staff
- Ensure staff are trained and supervised in the proper use, care and cleaning of PPE
- Maintain records on PPE assignments and training
- Ensure defective or damaged equipment is immediately replaced
- Provide written instructions on the use, care and maintenance of applicable PPE and ensure this documentation is readily accessible to employees
- Maintain hazard assessments and training records

2.2 Staff

Employees are responsible for following the requirements of the PPE Program. Employees will:

- Wear PPE as required
- Attend required training sessions
- Care for, clean and maintain PPE as required
- Inform their manager/supervisor of the need to repair or replace PPE

3.0 HAZARD ASSESSMENT AND EQUIPMENT SELECTION

General guidelines for selecting PPE are outlined in Appendix A. Adequate protection against all hazards must be provided to employees as required.

All personal protective clothing and equipment should be of safe design and construction and appropriate to the work performed. PPE must be maintained in a sanitary and reliable condition.

Only those items of protective clothing and equipment that meet CSA (Canadian Standards Association), NIOSH (National Institute of Occupational Safety and Health) or ANSI (American National Standards Institute) standards will be accepted for use. Newly purchased PPE must conform to standards referenced in the WorkSafe BC Occupational Health and Safety Regulation, as follows:

- Eye and Face Protection: *CSA Standard CAN/CSA-Z94.3-92* or *ANSI Z87.1-1989*
- Head Protection: *CSA Standard CAN/CSA-Z94.1-92* or *ANSI Z89.1-1986*
- Foot Protection: *CSA Standard CAN/CSA-Z195-M92* or *ANSI Z41.1-1991*
- Hand Protection: There are no ANSI standards for gloves; however, selection must be based on the performance characteristics of the glove in relation to the tasks to be performed
- Respiratory Protection: In accordance with *CSA Standard Z94.4-02, Selection, Use, and Care of Respirators*

Careful consideration must be given to the comfort and fit of PPE in order to ensure it is appropriately used.

4.0 SAFETY HEADGEAR

Head protection must be used by all persons engaged in construction and other work when hazards from falling or fixed objects or electrical shock are present.

5.0 EYE AND FACE PROTECTION

All persons who may be in eye hazard areas must wear protective eyewear to prevent eye injuries.

Suitable protectors should be used when employees are exposed to hazards from flying particles; molten metal; acids or caustic liquids; chemical liquids, gases or vapours; bioaerosols; or potentially injurious light radiation. The following situations should be considered and complied with as appropriate:

- Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment
- Side protectors should be used when there is a hazard from flying objects
- Goggles and face shields should be used when there is a hazard from chemical splash
- Face shields should only be worn over primary eye protection (safety glasses or goggles)
- For employees who wear prescription lenses, eye protectors should either incorporate the prescription in the design or fit properly over the prescription lenses
- Protectors should be marked to identify the manufacturer

Equipment fitted with appropriate filter lenses should be used to protect against light radiation. Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.

If any personnel wear personal glasses, they should be provided with suitable eye protection to wear over their glasses. Prescription safety eyewear must meet the requirements of *CSA Standard CAN/CSA-Z94.3-92, Industrial Eye and Face Protection*. Employees or students who wear prescription lenses while engaged in operations that involve eye hazards should wear eye protection that incorporates the prescription in its design, or that can be worn over the prescription lenses (i.e., goggles or face shields) without disturbing the proper position of the prescription lenses or the protective lenses.

6.0 FOOTWEAR

Safety shoes or boots that provide impact protection must be worn in work areas when carrying or handling materials which could be dropped, such as packages, objects, parts or heavy tools, and for any other activities where objects might fall onto the feet.

7.0 HAND PROTECTION

Suitable gloves must be worn when hazards from chemicals, cuts, lacerations, abrasions, punctures, burns, biological fluids or harmful temperature extremes are present. Glove selection must be based on performance characteristics of the gloves, working conditions, duration of use and hazards present. One type of glove will not be suitable for all situations.

When selecting gloves for protection against chemicals, the first consideration is to determine, if possible, the exact nature of the substances that will be encountered. Read instructions and warnings on chemical container labels and MSDSs before working with any chemical. The MSDS will often list recommended glove types in the section for personal protective equipment.

All glove materials are eventually permeated by chemicals. However, they can be used safely for limited time periods if their specific use and other characteristics (i.e., thickness, permeation rate and duration of use) are known. Safety and Security can assist in determining the specific type of glove material that should be worn when working with a particular chemical.

8.0 BODY AND OTHER PROTECTION

Body protection must be used as appropriate and in compliance with the relevant OHS Regulation. For the purposes of the PPE Program, body protection includes, but is not limited to, wearing:

- Gowns, smocks, coveralls or overalls, where required
- High-visibility vests when working in high-traffic areas
- Hair nets, where required

- Radiation vests, where required
- Sleeve guards, where required

9.0 RESPIRATORY PROTECTION

9.1 Training

All staff members who are required to wear respiratory protection in the course of their duties will be trained in the correct use, limitations and maintenance requirements of the respirators used. Training and instruction will be coordinated by the responsible department, which will ensure it is conducted by qualified persons. Records of respirator training will be maintained by the departmental manager or supervisor responsible.

Instruction and training will include the following topics and procedures:

- The nature of respiratory hazards to which staff may be exposed in the course of their duties
- Hazard evaluation and selection of appropriate respiratory protection
- Operation, limitations and capabilities of issued respirators
- Respirator inspection, donning and removal procedures, positive- and negative-pressure fit testing and wearing of respirators. Employees will be given hands-on practice in these techniques to become thoroughly familiar with the issued respirators and confident in using them
- Cleaning, maintenance and storage procedures for respirators
- Emergency procedures

9.2 Respirator Selection

The selection of the respirator must be appropriate to the contaminants, the concentrations and the level of protection provided by the respirator.

Only respirators bearing NIOSH approval or other respirators acceptable to WorkSafe BC will be used by staff and students.

Workers in the following departments, who may be exposed to airborne infectious agents, are required to be fit tested annually. The departments identified as high-risk are:

- Emergency
- Intensive Care Unit
- Radiology

- Respiratory Therapy
- Pathology
- Nursing units with negative pressure isolation rooms
- PACU
- OR

***Physicians and residents in these areas included.

9.3 Respirator Facial Fit

A fit test will be conducted for any face seal–dependent respirator when it is issued to an employee to ensure that the wearer is able to achieve a satisfactory fit. **The wearer must be clean-shaven to use all respirators, with the exception of NIOSH- or MSHA-approved hood or helmet systems.**

Fit testing will be repeated annually for all employees who use respirators.

Positive- and negative-pressure fit checks will be performed by employees each time they don a respirator.

Records of respirator fit-test results will be maintained by the manager or supervisor and should include:

- The name of the person tested
- The date of the test
- The specific make, model, style and size of respirator
- The type of fit test and test agents used
- The results of the fit test
- The name of the person giving the test

10.0 PROGRAM EVALUATION

Managers and supervisors should evaluate their PPE requirements annually. Any deficiencies noted in the course of this evaluation, or at any other time, will be promptly corrected.

APPENDIX A —GENERAL GUIDELINES FOR CHOOSING PPE

1. Description and Use of Eye and Face Protectors

Safety Glasses. Protective eyeglasses are made with safety frames and tempered glass or plastic lenses, temples and side shields which provide eye protection from moderate impact and particles encountered in job tasks such as carpentry, woodworking, grinding, scaling, etc. Safety glasses are also available in prescription form for those persons who need corrective lenses.

Single-Lens Goggles. Vinyl-framed goggles of soft pliable body design provide adequate eye protection from many hazards. These goggles are available with clear or tinted lenses and perforated, port-vented or non-vented frames. Single-lens goggles provide similar protection to spectacles and may be worn in combination with spectacles or corrective lenses to ensure protection along with proper vision.

Eye and Face Protection Selection Chart

Source	Assessment of Hazard	Protection
IMPACT Chipping, grinding, machining, drilling, chiselling, riveting, sanding, etc.	Flying fragments, objects, large chips, particles, sand, dirt, etc.	• Spectacles with side protection, goggles, face shields • For severe exposure, use face shield over primary eye protection
CHEMICALS Acid and chemical handling	Splash, irritating mists	• Goggles—eyecup and cover types. • For severe exposure, use face shield over primary eye protection • Special-purpose goggles
DUST Woodworking, buffing, general dusty conditions	Nuisance dust	• Goggles—eyecup and cover types.

2. Head Protection

Head injuries are caused by falling or flying objects or by bumping the head against a fixed object. Head protectors, in the form of protective hats, must resist penetration and absorb the shock of a blow. The shell of the protective hat is hard enough to resist the blow and the headband and crown straps keep the shell away from the wearer's skull. Protective hats can also protect against electrical shock.

Protective hats are made in the following types and classes:

- Type I—Helmets with a full brim
- Type II—Brimless helmets with a peak extending forward from the crown
- Class A—General service, limited voltage. Intended for protection against impact hazards. Used in mining, construction, and manufacturing
- Class B—Utility service, high voltage. Used by electrical workers
- Class C—Special service, no voltage protection. Designed for lightweight comfort and impact protection. Used in certain construction and manufacturing sites, refineries, and where there is a possibility of bumping the head against a fixed object

3. Foot Protection

There are many types and styles of protective footwear and a particular job may require protection in addition to that listed here. Footwear that meets established safety standards will have a CSA label on each shoe.

Steel-Reinforced Safety Shoes. These shoes are designed to protect feet from common machinery hazards such as falling or rolling objects, cuts and punctures. The entire toe box and insole are reinforced with steel, and the instep is protected by steel, aluminum or plastic materials. Safety shoes are also designed to insulate against temperature extremes and may be equipped with special soles to guard against slips, chemicals and/or electrical hazards.

Safety Boots. Safety boots offer more protection when splash or spark hazards, such as chemicals or molten materials, are present.

- When working with corrosives, caustics, cutting oils or petroleum products, neoprene or nitrile boots are often required to prevent penetration
- Foundry or "gaiter"-style boots feature quick-release fasteners or elasticized insets to allow speedy removal should any hazardous substance get inside the boot
- When working with electricity, special electrical hazard boots are available and are designed with no conductive materials other than the steel toe (which is properly insulated)

4. Hand Protection

Skin contact is a potential source of exposure to toxic materials; it is important that the proper steps be taken to prevent such contact. Most accidents involving hands and arms can be classified under four main hazard categories: chemicals, abrasions, cutting and heat. There are gloves available that can protect workers from any of these individual hazards or any combination thereof.

Gloves should be replaced periodically, depending on frequency of use and permeability to the substance(s) handled. Gloves that are overtly contaminated should be rinsed and then carefully removed after use.

Gloves should also be worn whenever it is necessary to handle rough or sharp-edged objects or very hot or very cold materials. Types of gloves may include leather, welder's gloves, aluminum-backed gloves and other types of insulated gloves.

Careful attention must be paid to protecting your hands when working with tools and machinery. Power tools and machinery must have guards installed or incorporated into their design that prevent the hands from contact with the point of operation, power train or other moving parts. To protect hands from injury due to contact with moving parts, it is important to:

- Ensure guards are always in place and used
- Always lock out machines or tools and disconnect power before making repairs
- Treat a machine without a guard as inoperative
- Do not wear gloves around moving machinery such as drill presses, mills, lathes and grinders

The following is a guide to the most common types of protective work gloves and the types of hazards they can guard against.

Disposable Gloves. Disposable gloves, usually made of lightweight plastic, can help guard against mild irritants.

Fabric Gloves. Made of cotton or fabric blends; generally used to improve grip when handling slippery objects. They also help insulate hands from mild heat or cold.

Leather Gloves. These gloves are used to guard against injuries from sparks or scraping against rough surfaces. They are also used in combination with an insulated liner when working with electricity.

Metal Mesh Gloves. These gloves are used to protect hands form accidental cuts and scratches. They are most commonly used by persons working with cutting tools or other sharp instruments.

Aluminized Gloves. Gloves made of aluminized fabric are designed to insulate hands from intense heat. These gloves are most commonly used by persons working with molten materials.

Chemical Resistance Gloves. These gloves may be made of rubber, neoprene, polyvinyl alcohol or vinyl, etc. The gloves protect hands from corrosives, oils and solvents. When selecting chemical resistance gloves, be sure to consult the manufacturers' recommendations, especially if the gloved hand will be immersed in the chemical.

5. Respirator Protection

Depending on annual fit tests, workers will be fit tested to one of the following N95 respirators:

- 3M 1870
- 3M 8210
- 3M 1860
- 3M 1860S
- Kimberly-Clark 46767
- Kimberly-Clark 46867

If any of the respirators above do not fit a worker, fit testing will be performed using another model of respirator available. If all available respirators fail to provide adequate protection for the worker, the worker must:

1. Notify his or her supervisor immediately
2. Avoid going into areas of potential airborne exposure