LIFESAVING SOCIETY®

*The Lifeguarding Experts*

# Intermediate First Aid **Supplement**

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# FIRST AID SUPPLEMENT

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The Lifesaving Society is Canada's lifeguarding expert. The Society works to prevent drowning and water-related injury through its training programs, Water Smart® public education initiatives, drowning research, aquatic safety management services and lifesaving sport.

Annually, over 1.5 million Canadians participate in the Society's swimming, lifesaving, lifeguard and leadership training programs. The Society sets the standard for aquatic safety in Canada and certifies Canada's National Lifeguards.

The Society is an independent, charitable organization educating Canadian lifesavers since the first Lifesaving Society Bronze Medallion Award was earned in 1896.

The Society represents Canada internationally as an active member of the Commonwealth Royal Life Saving Society and as Canada's Full Member in the International Life Saving Federation. The Society is the Canadian governing body for lifesaving sport - a sport recognized by the International Olympic Committee and the Commonwealth Games Federation.

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LIFESAVING SOCIETY®

*The Lifeguarding Experts*

# "Whomsoever you see in distress, recognize in them a fellow human being."

- Royal Life Saving Society Motto

## Mission

To prevent drowning and reduce water-related injury.

## Vision

Canada free from drowning and water-related injury.

## Values

Guided by humanitarian principles, we are the Canadian leader in the prevention of drowning and water-related injury.

- We are collaborative, innovative, and ethical.
- We operate with fairness, respect, trust, and integrity.
- We value diversity, flexibility, and creativity.
- We seek inclusiveness, driven by the needs of our community.
- We are a dynamic organization that succeeds through volunteerism, pro-active leadership, and the pursuit of excellence.

# Contents

# Introduction

Lifesaving Society first aid provides you with the knowledge and skills to confidently apply first aid principles to situations both in and out of the workplace.

Lifesaving Society BC & Yukon Emergency First Aid is equivalent to WorkSafeBC Basic First Aid and can be used for employment as an Occupational First Aid Attendant. If you work for a larger workplace, you can take a Standard First Aid course which is equivalent to WorkSafeBC Intermediate First Aid.

The *First Aid Supplement* provides additional information to candidates for certification with WorkSafeBC. The *Canadian First Aid Manual* is the required reference for first aid courses.

## Identification

Candidates are required to produce one (1) piece of acceptable, valid, photographic identification (photo ID) to the First Aid Instructor/Examiner at the start of the course.

**Examples of acceptable photo ID are:**

- Valid Canadian or U.S. Driver's License, or BC Services Card
- Valid passport
- Valid BC student ID issued for the current school year
- Employee picture ID card
- Valid Secure Certificate of Indian Status or Certificate of Indian Status card
- BC photo ID (digital) issued November 1996 or later
- Canadian government issued photo ID

**If you do not possess valid photo ID, you must provide at least one piece of primary ID and one pieces of secondary ID:**

| Primary identification | Secondary identification |
|---|---|
| Birth certificate | Naturalization certificate |
| Canadian citizenship ID | Marriage or change of name certificate |
| Canadian record of landing | Valid credit card (name must be on card) |
| Canadian student or work visa | Parole certificate or conditional release card |
| Returning resident permit | Vehicle registration |
| | Social insurance card or BC Care Card |

## Process to Attain Certification

To attain certification for WorkSafeBC Basic or Intermediate First Aid equivalent courses, candidates must:

- Attend 100% of the course.
- Successfully demonstrate the "Must Sees" for each of the test items within the Lifesaving Society's *First Aid & CPR Award Guide* during the course.
- Pass the written exam (at least 70% is required).
- Sign the Candidate Information Form/WorkSafeBC waiver.

Successful candidates are issued a temporary card (valid for 60 days) from the First Aid Instructor/ Examiner as proof of completion of the course.

## Certification Currency

Lifesaving Society Emergency and Standard First Aid certifications are valid for three (3) years from course completion. We recommend that you complete first aid refresher training every year to maintain your skills.

To recertify a WorkSafeBC Standard First Aid Equivalent award, candidates may take an 8 hour recertification. .

## Evaluation & Accommodation

First Aid and CPR courses are physically demanding. The First Aid Instructor/Examiner will provide accommodation where possible. Candidates must be able to demonstrate all "Must Sees" to earn a certification. If needed, an oral examination may be administered by the First Aid Instructor/Examiner instead of a written exam.

Candidates who fail the written exam may attempt a second written exam no sooner than 24 hours after the first failed exam. Candidates have 30 days from the first failed exam to complete a second attempt. Candidates who fail any practical evaluations must re-take the course.

**Note:** Words within this document shown in **green and bold** text are defined in the *Glossary*.

# Principles of first aid

## Barriers to First Aid

1. **Bystander effect:** "Someone else will look after the victim." Offer help in any way you can.
2. **Fear of making things worse:** At the very least, call 911 when someone needs first aid treatment.
3. **Fear of infection or disease:** While there is a risk of disease transmission if you come into contact with bodily fluids (e.g., blood, vomit, or saliva), there are many ways to reduce the risk. Use personal protective equipment and universal precautions (i.e., hand washing and sanitizing).
4. **Fear of a lawsuit:** There is legislation in British Columbia that protects first aiders both in and out of the workplace (e.g., Good Samaritan Act, Workers Compensation Act).

## Good Samaritan Act

### No liability for emergency aid unless gross negligence.

"A person who renders emergency medical services or aid to an ill, injured, or unresponsive person at the immediate scene of an accident or emergency that has caused the illness, injury, or unresponsiveness, is not liable for damages for injury to or death of that person caused by his act or omission in rendering the medical services or aid unless he is grossly negligent."

**Note:** The Good Samaritan Act does not apply if the person rendering medical services or aid is:

- Employed expressly for that purpose, or
- Does so with a view to gain.

## Good Samaritan Drug Overdose Act

### Exempt from possession of substance charges or violation of parole orders.

The *Good Samaritan Drug Overdose Act* applies to anyone seeking emergency services during an overdose, including witnesses, bystanders, rescuers, and the person experiencing an overdose. Anyone at the scene who may be in possession of controlled substances is exempt from being charged or convicted if they seek help for a victim suffering from an overdose. The *Act* encourages Canadians to save a life and call emergency services in the event of a drug overdose regardless of the circumstances.

**Note:** Legislation for protection of lay rescuers differs across Canada.

## Consent

You must obtain permission before providing first aid treatment to any victim. Every adult who is capable of giving or refusing consent has:

- The right to give or refuse consent on any grounds, including moral or religious grounds, even if the refusal will result in death.
- The right to revoke consent.
- The right to expect that a decision to give, refuse, or revoke consent will be respected.

Consent may be expressed orally or may be inferred from conduct. Consent is "implied" if the victim is unresponsive. If unsure, refer to direction from EMS personnel.

### Consent for Minors

Obtain consent for a **minor** from a parent or guardian before giving treatment (when possible). If a parent or guardian is not present, a minor can agree to first aid treatment if they understand what it involves, without requiring permission from their parent or guardian.

# Workplace first aid

## Workers' Compensation Act

In British Columbia, the *Workers' Compensation Act* protects workers and workplace **first aid attendant**s. A workplace first aid attendant who provides first aid services to a worker as a part of their employment duties will be protected from liability for inadvertent injury caused by a negligent act or omission.

The Workers' Compensation Board of British Columbia was created in 1917, now known as **WorkSafeBC**.

## Roles & Responsibilities

Workplace **first aid attendant**s provide care for injured or ill workers at their site of employment. The first aid attendant is responsible, and has full authority, for all first aid treatment of an injured worker until responsibility for treatment is accepted (a) at a place of medical treatment, (b) by the BC Ambulance Service, or (c) by a person with higher or equivalent first aid certification.

- First aid attendants may arrange transportation for workers to medical treatment.
- A supervisor may not overrule the decisions of the designated first aid attendant.
- Workers have the right to refuse treatment. The first aid attendant does not have the authority to overrule a worker's decision to seek medical treatment or the worker's choice of medical treatment.
- A first aid attendant must be physically and mentally capable of safely and effectively performing their required duties. The employer, at any time, may require the attendant to provide a medical certificate.

**A first aid attendant must:**

- Promptly provide injured workers with a level of care within the scope of their training.
- Objectively record observed or reported signs and symptoms of injuries and exposures to contaminants.
- Refer workers to medical treatment with injuries considered by the attendant as being serious or beyond the scope of their training.

## Qualifications

To be hired as a first aid attendant, candidates must:

a) Be at least 16 years old.

b) Successfully complete a first aid training course and examination approved by WorkSafeBC.

c) Hold a valid first aid certificate at the required level recognized by WorkSafeBC.

### Proof of Certification

First aid attendants must produce their original first aid certificate to their employer before their first shift as a first aid attendant or to a WorkSafeBC Prevention or Certification Officer upon request (within a reasonable period of time).

## Workplace First Aid Kits

### Basic first aid kit (CSA Z1220 Type 2)

| Description | Quantity |
|---|---|
| Adhesive bandages, sterile, assorted sizes (standard strip, large fingertip, knuckle, large patch) | 50 |
| Gauze pad, sterile, individually wrapped, 7.6 x 7.6 cm (3 in. x 3 in.) | 24 |
| Abdominal pad, sterile, individually wrapped, 12.7 x 22.9 cm (5 in. x 9 in.) | 2 |
| Conforming stretch bandage, relaxed length, individually wrapped, 5.1 cm x 1.8 m (2 in. x 2 yd.) | 2 rolls |
| Conforming stretch bandage, relaxed length, individually wrapped, 7.6 cm x 1.8 m (3 in. x 2 yd.) | 2 rolls |
| Compress/pressure dressing with ties, sterile, 10.2 x 10.2 cm (4 in. x 4 in.) | 4 |
| Triangular bandage, cotton, with two safety pins, 101.6 x 101.6 x 142.2 cm (40 in. x 40 in. x 56 in.) | 4 |
| Adhesive tape, 2.5 cm (1 in.) | 4.6 m |
| Antiseptic wound cleansing towelette, individually wrapped | 50 |
| Hand/skin cleansing towelette, individually wrapped (or equivalent) | 12 |
| Pocket mask with one-way valve | 1 |
| Examination gloves, disposable, medical grade, non-latex, powder free | 8 pairs |
| Biohazard waste disposal bag, single use | 2 |
| Bandage scissors, stainless steel | 1 |
| Splinter forceps/tweezer | 1 |
| Emergency blanket (aluminized, non-stretch polyester, minimum 132 x 213 cm (52 in. x 84 in.) | 1 |
| Arterial bleed tourniquet (windlass style or ratcheting type) | 1 |
| Medical grade face-mask | 6 |
| Face shield or safety eyewear | 2 |
| Contents list and blank first aid records | 1 list; many |

### Intermediate first aid kit (CSA Z1220 Type 3)

| Description | Quantity |
|---|---|
| Adhesive bandages, sterile, assorted sizes (standard strip, large fingertip, knuckle, large patch) | 50 |
| Gauze pad, sterile, individually wrapped, 7.6 x 7.6 cm (3 in. x 3 in.) | 24 |
| Gauze pad, sterile, individually wrapped, 10.2 x 10.2 (4 in. x 4 in.) | 12 |
| Non-adherent dressing, sterile, individually wrapped, 5.1 x 7.6 cm (2 in. x 3 in.) | 8 |
| Abdominal pad, sterile, individually wrapped, 12.7 x 22.9 cm (5 in. x 9 in.) | 2 |
| Conforming stretch bandage, relaxed length, individually wrapped, 5.1 cm x 1.8 m (2 in. x 2 yd.) | 2 rolls |
| Conforming stretch bandage, relaxed length, individually wrapped, 7.6 cm x 1.8 m (3 in. x 2 yd.) | 2 rolls |
| Compress/pressure dressing with ties, sterile, 10.2 x 10.2 cm (4 in. x 4 in.) | 2 |
| Compress/pressure dressing with ties, sterile, 15.2 x 15.2 cm (6 in. x 6 in.) | 2 |
| Triangular bandage, cotton, with two safety pins, 101.6 x 101.6 x 142.2 cm (40 in. x 40 in. x 56 in.) | 4 |
| Adhesive tape, 2.5 cm (1 in.) | 4.6 m |
| Elastic support/compression bandage, 7.6 cm (3 in.) | 2 |
| Eye dressing pad, sterile, and eye shield with elastic strap | 2 sets |
| Cold pack or equivalent | 2 |
| Antiseptic wound cleansing towelette, individually wrapped | 50 |
| Hand/skin cleansing towelette, individually wrapped (or equivalent) | 12 |
| A source of glucose as recommended by Diabetes Canada | 2 doses |
| Pocket mask with one-way valve | 1 |
| Examination gloves, disposable, medical grade, non-latex, powder free | 8 pairs |
| Biohazard waste disposal bag, single use | 4 |
| Bandage scissors, stainless steel (with angled, blunt tip) minimum 14 cm (5.5 in) | 1 |
| Splinter forceps/tweezer, fine point, stainless steel, minimum 11.4 cm (4.5 in.) | 1 |
| Splint, padded, malleable, minimum size 10.2 x 61 cm (4 in. x 4 in.) | 1 |
| Emergency blanket (aluminized, non-stretch polyester, minimum 132 x 213 cm (52 in. x 84 in.) | 2 |
| Arterial bleed tourniquet (windlass style or ratcheting type) | 1 |
| Medical grade face-mask | 6 |
| Face shield or safety eyewear | 2 |
| Contents list and blank first aid records | 1 list; many |

## Basic Requirements

First aid equipment and services must be supplied by the employer and be readily accessible to workers during working hours.

- First aid equipment, supplies, and facilities must be kept clean, dry, and ready for use.
- First aid facilities must be illuminated, heated, and ventilated. A sink plumbed with hot and cold running water, and a shower for treatment of chemical exposure needs to be nearby.
- A worker who is assigned to work alone, who is more than 20 minutes of travel time from the first aid station supplied by the employer, must be provided with a personal first aid kit.
- A first aid attendant cannot be assigned work which would interfere with their ability to receive a request for first aid treatment.
- Employers must have written procedures for providing first aid at the workplace.

## Location of First Aid

Signs must clearly indicate the location (and how to call for) first aid. Signs must be posted conspicuously throughout the workplace and every worker must be made aware of the location of first aid and the procedures for calling the attendant.

## Drugs and Medications in the Workplace

First aid attendants may not administer prescription drugs or medications. First aid attendants may assist workers to self-administer medication for which they have a prescription if the worker provides a letter from their physician. First aid attendants can provide injured workers with non-prescription (over-the-counter) medications purchased by the employer for use at the worksite, if appropriate to do so.

### Non-Prescription Drugs and Medications

An employer may choose to purchase non-prescription drugs or medications to address common ailments. The first aid attendant should have control over supplying the drugs and/or medications to workers. First aid attendants must follow employer's safe work procedures regarding drugs and medications.

- The first aid attendant must be familiar with the indications and contraindications for use (and side effects listed by the manufacturer) to inform the worker.
- The first aid attendant must check and strictly adhere to the expiry date of non-prescription drugs or medications.
- The first aid attendant must obtain a history of events that led up to the worker asking for relief. A first aid record should be filled out when giving out any drugs or medications.

## First Aid Procedures

Employers must keep up-to-date written procedures for providing first aid at the workplace, including:

a) The equipment, supplies, facilities, first aid attendants, and services available.

b) Coordination of multiple first aid attendants.

c) The location of and how to call for first aid.

d) How the first aid attendant is to respond to a call for first aid.

e) Instructions on how injured workers will be accessed and moved to an area accessible to BCEHS.

f) The authority of the first aid attendant over the treatment of injured workers and the responsibility of the employer to report injuries to WorkSafeBC.

g) Procedures for transporting an injured worker to medical services.

**Employers must post the procedures conspicuously in suitable locations throughout the workplace. All workers must be trained in the procedures.**

| **Emergency Contact List** *(Post next to the telephone or in another visible location if no telephone available)* | | |
|---|---|---|
| **First Responders** | | |
| Ambulance | 911 or ( ) | |
| Fire Department | ( ) | |
| Police | ( 250 ) 561-3300 | |
| | ( ) | |
| | ( ) | |
| **Building Contacts Trained in First Aid / Emergency Response / CPR** | | |
| Fiona Firstaid - AQUATICS | ( 250 ) 561-7700 x 1 | Cell phone ( 778 ) 347-7824 |
| Darryl Dislocate - UTILITIES | ( 250 ) 561-7700 x 2 | Cell phone ( 778 ) 347-5622 |
| Susan Saline - CITY HALL | ( 250 ) 561-7700 x 3 | Cell phone ( 250 ) 725-4633 |
| Randy Rigormortis - PUBLIC WORKS | ( 250 ) 561-7700 x 4 | Cell phone ( 250 ) 744-6766 |
| Tracy Triage - PARKS | ( 250 ) 561-7700 x 5 | Cell phone ( 778 ) 874-2433 |
| Harry Hyperthermia - BYLAW | ( 250 ) 561-7700 x 6 | Cell phone ( 778 ) 497-3784 |
| Anita Allergy - ROADS & FLEET | ( 250 ) 561-7700 x 7 | Cell phone ( 250 ) 255-3749 |
| **Additional Contact Information** | | |
| Local Hospital | ( 250 ) 565-2000 | |
| Poison Control | ( 800 ) 567-8911 | |
| Public Health Department | ( 250 ) 645-8983 | |
| Pool Company | ( ) | |
| Gas Company | ( 800 ) 224-9376 | |
| Lifesaving Society | ( 604 ) 299-5450 | |
| | ( ) | |

Above list reviewed and updated by: Penelope Procedures (Print Name) 2024-07-14 (Print Date (yyyy/mm/dd))

# Occupational health & safety

**"hazard"** - A thing or condition that may expose a person to a risk of injury, occupational disease, or death.

**"risk"** - The chance that someone could be harmed by a hazard. Risk can be categorized as high, medium, or low, based on the likelihood and potential seriousness of harm.

## Occupational Health & Safety (OHS)

An OHS program must be initiated and maintained when:

a) An employer has a workforce of 20 or more workers, and

b) At least one workplace is determined to create a moderate or high risk of injury, or

c) The workplace area is being built, maintained, repaired, rehabilitated, stabilized, upgraded, removed, or deactivated.

For small workplace operations, the employer must initiate and maintain a less formal program based on regular monthly meetings of workers for discussion of health and safety matters.

**An OHS program must be designed to prevent injuries and occupational disease. It must include:**

1. A statement of the employer's aims and responsibilities of the employer, supervisors, and workers.
2. Regular inspection of the premises, equipment, work methods and practices.
3. Safe operating procedures available for reference to all workers.
4. Periodic meetings to review health and safety activities and incident trends.
5. Prompt investigation of incidents to determine the action necessary to prevent their reoccurrence.
6. Maintenance of records, statistics, reports of inspections and incident investigations. These records must be available to the Joint Health & Safety Committee (if applicable) and workers.

## Hazard & Risk Assessment

Employers must conduct a risk assessment of the workplace including:

- The number of workers who may require first aid at any time.
- The nature and extent of the risks and hazards in the workplace, including a hazard rating (low, moderate, or high risk of injury), and the types of injuries likely to occur.
- Possible barriers to first aid being provided to workers.
- The time it may take to obtain transportation or to transport an injured worker to medical treatment.

## Identifying Hazards and Risk

Employers and workers need to be aware of possible hazards at their worksites. New and young workers, temporary workers, contractors, or those working alone are at particular risk of injury. Employers must provide training and/or signage for those who may be new to the worksite such as visitors, contractors, or maintenance workers.

### Determining the Level of Risk

A risk assessment determines the level of risk that hazards at the worksite pose to workers. Rate the risks as low, medium, or high. To help evaluate the risk level, consider:

- Who might be harmed? Is it all workers or a smaller number?
- What kind of injury or illness could be suffered, and how severe could it be?
- How long are workers exposed to the hazard? The longer the exposure, the higher the risk.
- How frequent is the exposure? If the task is repeated many times each shift, it carries more risk than a task done occasionally.

**A risk matrix can help determine the level of risk:**

| Probability | Impact | | | |
|---|---|---|---|---|
| | Minor | Moderate | Major | Extreme |
| Rare | Low | Low | Medium | Medium |
| Unlikely | Low | Medium | Medium | Medium |
| Moderate | Medium | Medium | Medium | High |
| Likely | Medium | Medium | High | High |
| Very Likely | Medium | High | High | High |

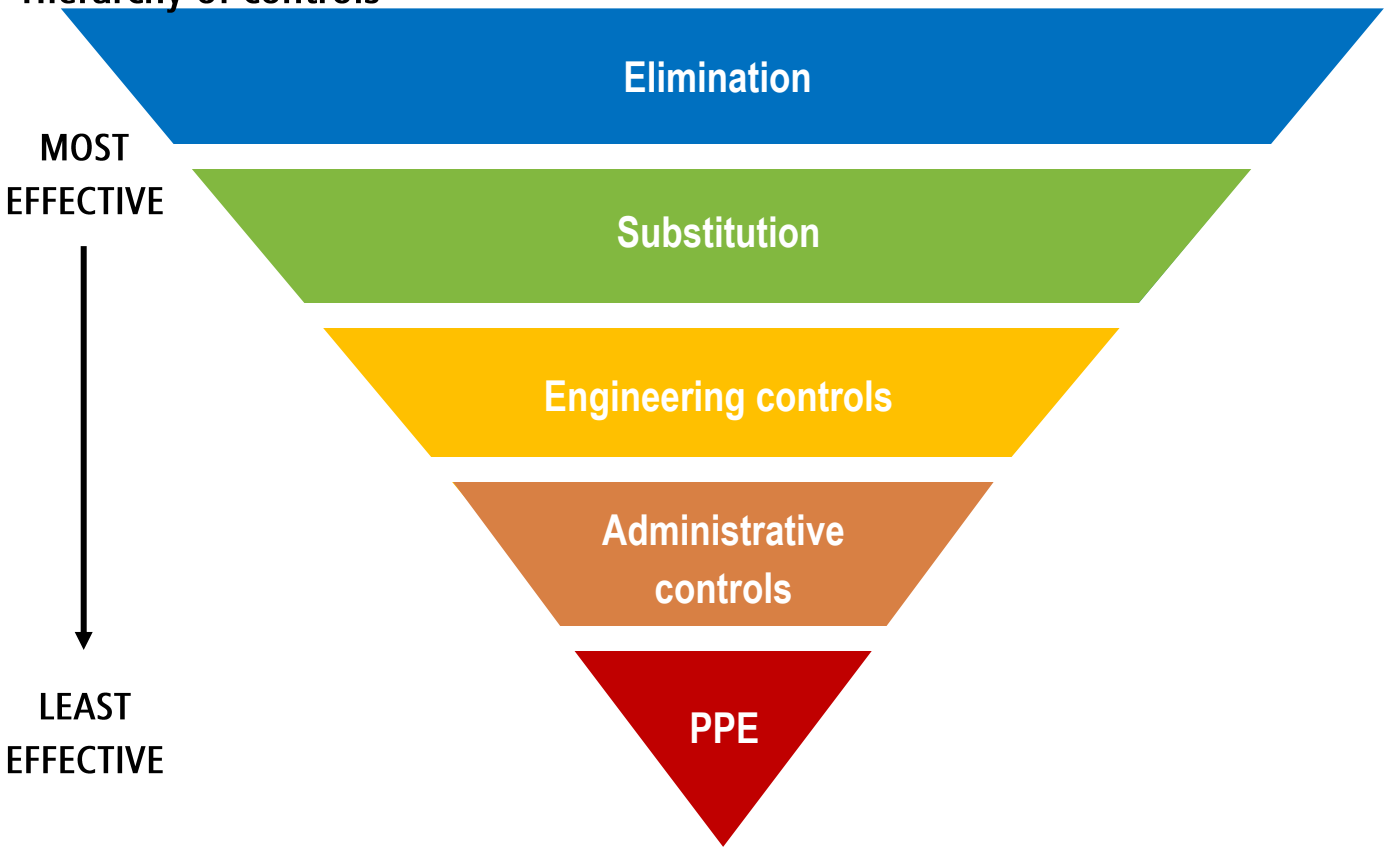
Document the risk assessment and make it available to workers or the Joint Health & Safety Committee(s). WorkSafeBC has customizable templates available for risk assessments and record keeping.

## Controlling Risks

When reducing risk, a hierarchy (order) should be followed. Always start by trying to eliminate the hazard. If elimination isn't possible, try to replace it (if possible) or put controls in place.

For example, first responders control risk by performing a scene assessment. They choose not to enter a burning building because they can't eliminate the hazard (fire). But, they can use controls and personal protective equipment to minimize the risks when they enter the building.

## Hierarchy of controls




### 1. Elimination

Physically remove the hazard.

*"Do we have to store items at a height only accessible by a ladder?"*

### 2. Substitution

Replace the material or process with a less hazardous one.

*"Can we use a chemical that is less harmful?"*

### 3. Engineering controls

Use work equipment or install equipment to prevent workers from being exposed to the hazard.

*"Could we put in guardrails to help prevent falls?"*

### 4. Administrative controls

Implement safe work procedures to help workers perform tasks safely.

*"Let's write a procedure for working in a confined space safely."*

### 5. Personal protective equipment and clothing

Use PPE to protect workers from hazards.

*"Use protective eyewear, respirator, and gloves when working with toxic chemicals."*

## Hazards in the Workplace

First aid attendants and workers can be exposed to hazards in the workplace. Using the **risk matrix** and control processes, employers train employees on workplace hazards to reduce the risk of injury.

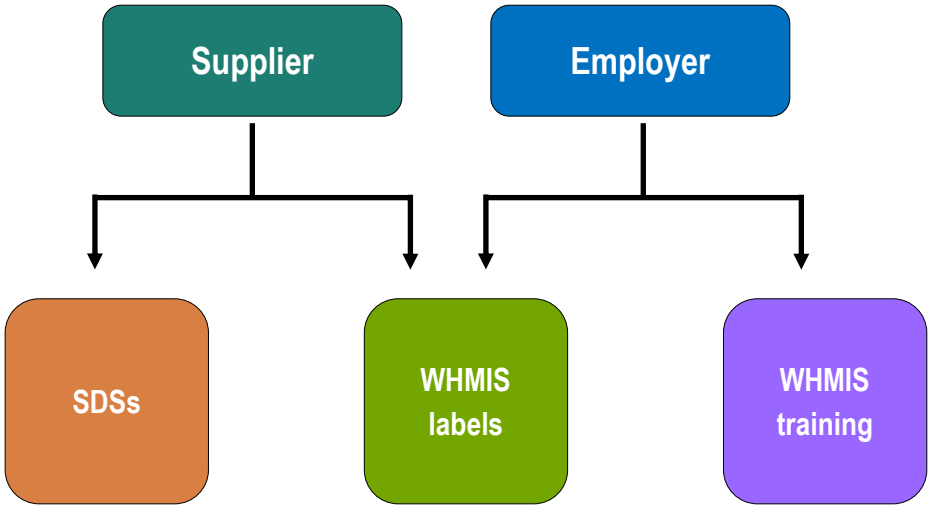
Common physical, psychological, and environmental workplace hazards in various occupations are:

1. Combustible dusts
2. Corrosive materials
3. Bullying and harassment
4. Flammable gases
5. Gases under pressure
6. Confined spaces
7. Electricity
8. Ergonomics
9. Falls from elevation
10. Fatigue impairment
11. Heat or cold stress
12. Lifting and handling
13. Mould
14. Noise
15. Slips, trips, and falls
16. Violence

## WHMIS and Safety Data Sheets

Workplace Hazardous Materials Information System (**WHMIS**) and Safety Data Sheets (**SDSs**) are helpful resources for first aid attendants when responding to workplace first aid emergencies.

The purpose of WHMIS and SDSs are to help ensure a safe workplace when working with hazardous products. WHMIS has four key elements: (a) Classification, (b) Labels, (c) Safety data sheets, and (d) Worker education and training.



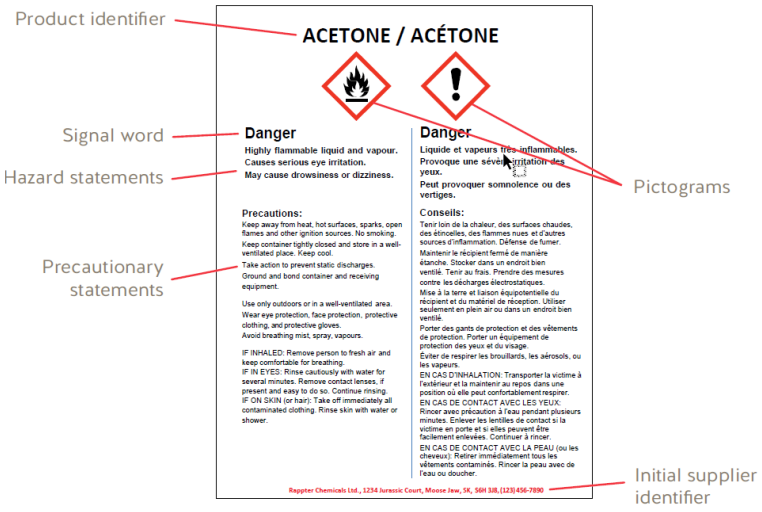
## WHMIS Pictograms

Pictograms are graphic images that show you what type of hazard a hazardous product presents:

| | | |
|---|---|---|
|  **Exploding bomb** (for explosion or reactivity hazards) |  **Flame** (for fire hazards) |  **Flame over circle** (for oxidizing hazards) |
|  **Gas cylinder** (for gases under pressure) |  **Corrosion** (for corrosive damage to metals, as well as skin, eyes) |  **Skull and crossbones** (can cause death or toxicity with short exposure to small amounts) |
|  **Health hazard** (may cause or suspected of causing serious health effects) |  **Exclamation mark** (may cause less serious health effects or damage the ozone layer) |  **Environment** (may cause damage to the aquatic enviroment) |
|  **Biohazardous infectious materials** (for organisms or toxins that can cause diseases in people or animals) | | |

## WHMIS Labels

A supplier label gives details about precautionary actions, physical state, and route of exposure.




## Workplace labels

A workplace label is needed when a hazardous product is poured into another container.

**Sample workplace label**

An example of a workplace label is shown below:

**ACETONE**

No smoking, sparks, or flames

Wear eye, face, and hand protection

Use in well-ventilated area, or wear NIOSH-approved respirator with organic vapour cartridges

**Safety data sheet available**

## Safety Data Sheets

Safety data sheets (SDSs) are provided by suppliers and give information about hazardous products and their safety precautions. An SDS will contain information about:

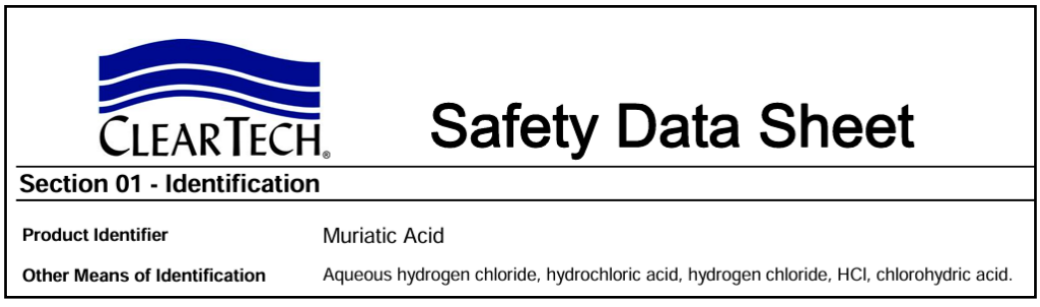
- The hazards of a product
- How to use the product safely
- What to expect if you don't follow the advice on the SDS
- How to recognize symptoms of exposure
- What to do if emergencies occur

In most cases, employers need to ensure that a SDS is no more than three (3) years old. Safety data sheets include 16 sections of information:

1. Identification
2. Hazard identification
3. Composition/information on ingredients
4. First aid measures
5. Fire fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

## First Aid Attendants

First aid attendants must be able to identify hazardous products in which a SDS may be needed and used. If a product has a WHMIS label, it will have an accompanying SDS. First aid attendants should follow first aid treatment measures listed on SDSs when an exposure occurs. SDSs should also be provided to medical professionals when workers are seeking medical treatment.


CLEARTECH

Safety Data Sheet

**Section 01 - Identification**

| | |
|---|---|
| **Product Identifier** | Muriatic Acid |
| **Other Means of Identification** | Aqueous hydrogen chloride, hydrochloric acid, hydrogen chloride, HCl, chlorohydric acid. |

## Workplace Hazard Ratings

WorkSafeBC categorizes workplaces to help determine the required first aid training and coverage based on its hazard rating. Hazard ratings reflect the nature and extent of the risks and hazards in the workplace.

**Example workplace hazards ratings are:**

### Agriculture

Berry farming - *Moderate*

Egg farming - *Low*

Grain farming - *High*

Hay or seed farming - *Moderate*

Orchard - *Moderate*

### Fishing

Dive fishing - *High*

Fish hatchery - *Moderate*

Trap fishing - *Moderate*

Trawl fishing - *Moderate*

### Forestry

Brushing or weeding - *High*

Forest fire fighting - *High*

Log booming - *High*

Log loading - *High*

Manual tree falling - *High*

Tree planting - *Moderate*

### Manufacturing

Aircraft - *Moderate*

Asphalt/Tar - *Moderate*

Automobile - *Moderate*

Batteries - *Moderate*

Compressed gases - *High*

Concrete - *Moderate*

Cosmetics - *Low*

Elevator - *Moderate*

Explosives - *High*

Food and beverage - *Moderate*

Glue or adhesive - Moderate

Marine vessels - *High*

Oil or gas - *High*

Pharmaceutical - *Low*

### Construction

Avalanche control - *High*

Building demolition - *High*

Cell towers - *High*

Commercial A/C - *Moderate*

Concrete - *Moderate*

Crane operation - *High*

Drywalling - *Moderate*

Electricity - *Moderate*

Fence installation - *High*

Highway painting - *Moderate*

Mould remediation - *High*

Traffic control - *High*

### Transportation

Airport - *Moderate*

Armoured car - *High*

Barge - *Moderate*

Courier - *Moderate*

Ferry - *Moderate*

Limousine - *Low*

Moving - *Moderate*

Taxi - *Low*

Water taxi - *Moderate*

### Trade

Bakery - *Moderate*

Butcher shop - *Moderate*

Garden supply - *Low*

Gas bar - *Low*

Retail - *Low*

### Services

Fitness centre - *Low*

Hair styling - *Low*

Restaurant - *Low*

### Business

Accounting - *Low*

Call centre - *Low*

Insurance - *Low*

### Health Care

Ambulance - *Moderate*

Counselling - *Low*

First aid - *Moderate*

Medical clinic - *Low*

# Self-protection

## Transmission of Infectious Diseases

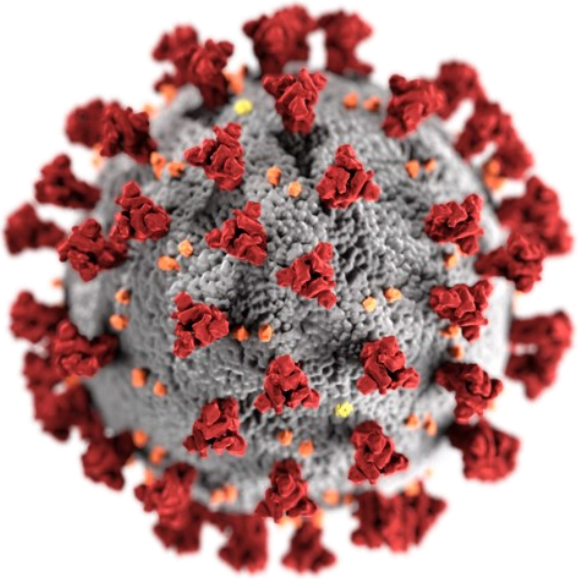
Infectious diseases are the result of biological agents entering the body. A biological agent could include a virus, bacteria, fungi, and other microorganisms and their associated toxins. Infectious diseases include **communicable diseases** (transmitted from human to human) and **zoonotic diseases** (transmitted from animal to human).

**Communicable diseases are transmitted from human to human via:**

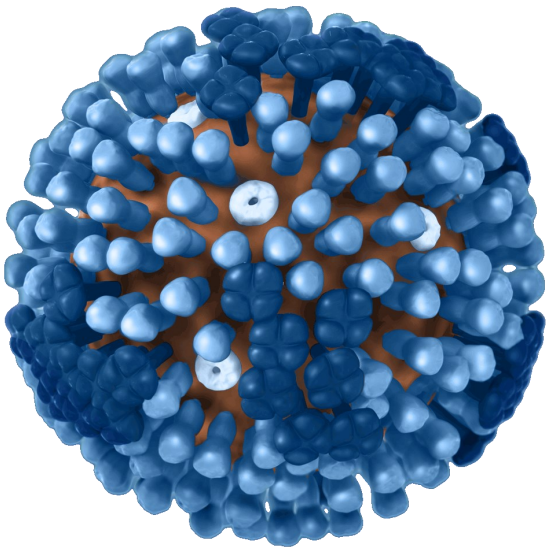
- Blood and other bodily fluids - bloodborne diseases (e.g., HIV/AIDS, hepatitis B and C)
- Direct and indirect contact with bodily fluids or feces - contact diseases (e.g., norovirus, *C. difficile*)
- Airborne transmission of respiratory droplets (e.g., coronavirus, influenza, measles, tuberculosis)

**Zoonotic diseases can be transmitted between animals and humans in various ways, via:**

- Contact with skin (e.g., brucellosis, tularemia)
- Contact with saliva (e.g., rabies, Hantavirus)
- Air (e.g., Hantavirus, Q fever)
- Anthropod bites, particularly those of mosquitoes (e.g., West Nile Virus), fleas (e.g., plague), and ticks (e.g., Lyme disease, Rocky Mountain Fever)



*SARS-CoV-2 virus*



*influenza virus*

## Workplace Procedures

Employers must identify potential biological agents that could be in the workplace and implement a communicable disease prevention plan. Employers also must offer vaccinations without cost to workers who are at risk of occupational exposure.

Employees must be trained in safe work procedures to reduce the risk of exposure to disease. Routine practices include:

- Practicing regular **hand hygiene**.
- Wearing disposable gloves when there is a risk of touching blood and bodily fluids.
- Wearing or using PPE during first aid procedures which may generate respiratory aerosols or splashes of bodily fluids, such as pocket mask with one-way valve (including **HEPA filter**), **eye protection**, face shields, gowns, and medical face masks.
- Handling and disposing of sharps safely.

## Hand Hygiene

Hand hygiene includes:

- Sanitizing hands with a hand rub with an alcohol content of 60-80% when the hands are not visibly soiled.
- Wash hands with soap and running water for 20-30 seconds when the hands are visibly soiled. If water is unavailable, use a moistened towelette, followed by an alcohol-based hand rub.

**Hand washing in the workplace** should occur:

- After handling materials that may be contaminated
- Before leaving a work area
- Before and after direct contact with another person/co-worker
- If blood or bodily fluids come into contact with the worker's skin
- After removing gloves (even if the gloves appear to be intact)
- After removing other PPE (e.g., eye protection or face mask)

## Sharps

Sharps such as needles may be contaminated with infected blood or bodily fluids. Workers need to be trained on handling and disposing of them safely.

**When dealing with sharps, follow these guidelines:**

- Don't pick up or handle sharps unless you have been trained to do so and have a proper container to dispose of them.
- Don't try to recap needles.
- Don't try to remove contaminated needles from disposable syringes. Discard them as a single unit.
- Don't dispose of sharps in regular garbage. This can create a hazard for others.
- Wear disposable gloves and use tongs or pliers to pick up the needle.
- Place the needle in the sharps container, pointed end first, away from you.
- Remove and discard the gloves, then wash your hands with soap and water or use an alcohol-based hand rub.

## Disinfection Practices

Clean up spills containing infectious material by restricting access to the area and wearing appropriate PPE. Gather plastic bags for the contaminated items and bleach or germicide for the spill. Follow the directions of the chemical for disinfection protocols. Wipe up and dispose of visible material and decontaminate the area using disinfectant.

**First aid equipment**

Many first aid equipment items are disposable. Anything that comes in contact with blood or bodily fluids must be disposed of in a biohazard waste bag. When disinfecting first aid equipment and first aid rooms, clean the items with a disinfectant solution, following the protocols on the chemical label.

**If wearing communicable disease PPE, follow these steps:**

1. Wash your hands or use an alcohol-based hand rub.
2. Put on a surgical mask.
3. Put on eye and face protection, such as goggles or a face shield.
4. Put on a gown or apron.
5. Put on gloves.

**If removing communicable disease PPE, follow these steps:**

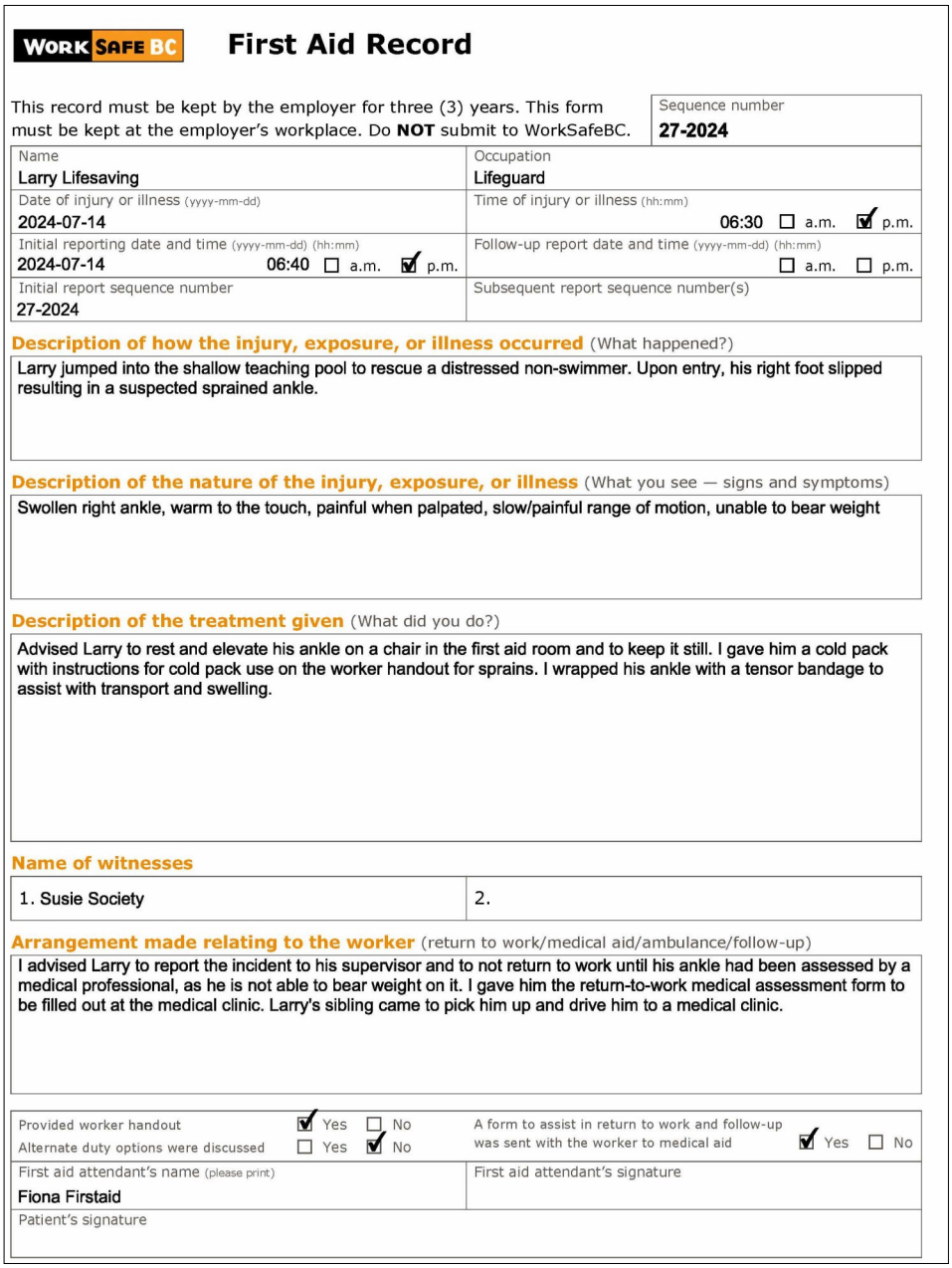
1. Remove the gown or apron, roll it inside out, and dispose in a garbage receptacle. Remove your gloves into the rolled-up gown when you remove your sleeves. Wash your hands.
2. Remove eye protection and surgical mask. Wash your hands.

# Communication

## First Aid Records

First aid records must be filled out for all injuries and exposures to contaminants in the workplace. First aid records must:

- Be submitted to an authorized supervisor and kept for at least 3 years.
- Be kept confidential and may not be disclosed to unauthorized workers.
- Be available for inspection by a WorkSafeBC officer.
- Be available to workers to request a copy of their first aid record.



WORK SAFE BC **First Aid Record**

This record must be kept by the employer for three (3) years. This form must be kept at the employer's workplace. Do **NOT** submit to WorkSafeBC.

Sequence number: **27-2024**

| Name | Occupation |
|---|---|
| Larry Lifesaving | Lifeguard |
| Date of injury or illness (yyyy-mm-dd): 2024-07-14 | Time of injury or illness (hh:mm): 06:30 ☐ a.m. ☑ p.m. |
| Initial reporting date and time (yyyy-mm-dd) (hh:mm): 2024-07-14 06:40 ☐ a.m. ☑ p.m. | Follow-up report date and time (yyyy-mm-dd) (hh:mm): ☐ a.m. ☐ p.m. |
| Initial report sequence number: 27-2024 | Subsequent report sequence number(s) |

**Description of how the injury, exposure, or illness occurred** (What happened?)

Larry jumped into the shallow teaching pool to rescue a distressed non-swimmer. Upon entry, his right foot slipped resulting in a suspected sprained ankle.

**Description of the nature of the injury, exposure, or illness** (What you see — signs and symptoms)

Swollen right ankle, warm to the touch, painful when palpated, slow/painful range of motion, unable to bear weight

**Description of the treatment given** (What did you do?)

Advised Larry to rest and elevate his ankle on a chair in the first aid room and to keep it still. I gave him a cold pack with instructions for cold pack use on the worker handout for sprains. I wrapped his ankle with a tensor bandage to assist with transport and swelling.

**Name of witnesses**

| 1. Susie Society | 2. |
|---|---|

**Arrangement made relating to the worker** (return to work/medical aid/ambulance/follow-up)

I advised Larry to report the incident to his supervisor and to not return to work until his ankle had been assessed by a medical professional, as he is not able to bear weight on it. I gave him the return-to-work medical assessment form to be filled out at the medical clinic. Larry's sibling came to pick him up and drive him to a medical clinic.

| | |
|---|---|
| Provided worker handout ☑ Yes ☐ No<br>Alternate duty options were discussed ☐ Yes ☑ No | A form to assist in return to work and follow-up was sent with the worker to medical aid ☑ Yes ☐ No |
| First aid attendant's name (please print): Fiona Firstaid | First aid attendant's signature |
| Patient's signature | |

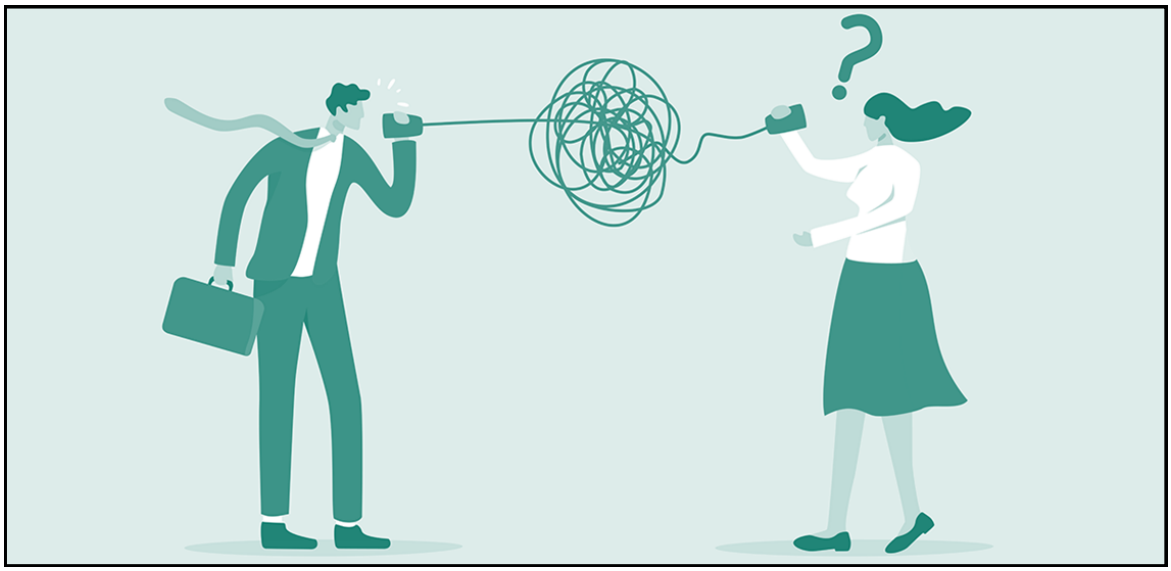
**Activity:**

Fill out First Aid Record

## Barriers to Effective Communication

Effective two-way communication is critical during a first aid emergency. Some barriers to effective communication are:

- **Language** - A language barrier between first aider and victim/bystanders will make communication more difficult. Try to find someone to translate or communicate in the other language if possible. If not possible, smart devices have good translation options.
- **Inactive listening -** Distracted listening or assumptions may lead to inaccurate assessments and treatment or support the victim. Pay attention to what the individual is saying or describing during first aid assessments. Repeat or paraphrase the individual's response to confirm understanding.
- **Poor equipment -** There may be technical problems with equipment (e.g., phones or radios) on a worksite. Check your equipment at the start of each shift to ensure it is working properly.
- **Noise -** There may be no way to prevent noise during an incident. Get close to the victim and listen, pay attention to body language, gestures, and facial expressions.
- **Lacking clarity -** Using overly complicated language and intensity in your communication may affect the receivers ability to understand. Use plain language and appropriate tone of voice and body language to convey your meaning to limit confusion.
- **Jumping to conclusions -** People often hear what they expect to hear rather than what is actually said and may jump to incorrect conclusions.



# Scene Assessment

## Multiple Victims & Triage

Challenging situations can arise in an accident or disaster involving multiple victims. Such a situation requires the first aid attendant to use their skills and judgment, often within a scene of mass panic and hazards.

### Disaster Response

The more information first aid attendants provide to EMS dispatchers, the more they can assist with rapid mobilization of appropriate personnel and equipment. When faced with multiple victims, the first aid attendant must prioritize victim care for treatment and transport.

### Triage of Victims

The following rules of triage apply:

1. Only immediately life-threatening conditions (e.g., airway obstruction, distressed breathing, major bleeding) are identified and treated in the initial triage round.
2. Saving a life takes precedence over saving a limb.

### Sorting Victims

Use the START (Simple Triage and Rapid Treatment) triage system to sort victims based on objective criteria on how they present. The severity of the injury and treatment/transport priority are sorted by colour code so treatment and transport crews can see at a glance which victims have been triaged to which level:

- **GREEN** - minor injury (e.g., walking, wounded)
- **YELLOW** - delayed (i.e., treatment can wait)
- **RED** - immediate treatment/transport required
- **BLACK** - expectant (unlikely to survive) or deceased

# Transportation

## Rapid Transport Criteria

First aid attendants must initiate immediate transfer to hospital (e.g., call for ambulance) for any injured worker who meets Rapid Transport Criteria (**RTC**). The three categories are (a) mechanism of injury, (b) anatomy of injury, and (c) findings in the primary assessment.

### 1. Mechanism of Injury

- Traumatic injury likely to result in a loss of sight, hearing, or touch
- Free fall from a height greater than 6.5 metres
- Severe deceleration in a motor vehicle accident characterized by:
    - High-speed accident and/or major vehicular damage
    - Broken windshield, bent steering wheel, or significant damage to the passenger compartment
    - Occupant thrown from vehicle (i.e., ejection), partial or complete
    - One or more vehicle occupants killed
    - Roll-over type of accident e.g. with a forklift
- Pedestrian, motorcyclist, or bicyclist struck at greater than 30 km/h (20 mph)
- Crushing injuries to the trunk, head or neck, or multiple crush injuries
- Smoke or toxic-gas inhalation, or carbon monoxide poisoning
- Decompression illness (from diving) or any incident of drowning
- Electrical injuries

### 2. Anatomy of Injury

- Severe brain injury defined as one or more of the following: altered LOC with a sluggish response to light or depressed skull fracture
- Penetrating injuries to the eye, head, neck, chest, abdomen, groin, or extremities proximal to (above) elbow or knee
- Major fractures or crush injuries, or two or more proximal long–bone fractures– e.g., pelvis, humerus
- Degloved or pulseless extremity
- Amputation of an extremity arm or leg or a major part of the hand or foot
- Severe hemorrhages
- Significant respiratory compromise or punctured lung
- Pregnant woman with significant trauma– e.g., limb fracture, or chest or abdominal trauma

- Circulatory shock or injury to an internal organ
- New paralysis or neurological deficit
- Facial injury with potential for airway compromise
- Asphyxiation or poisoning resulting in partial or total loss of physical control or a respiratory rate of fewer than 10 breaths per minute, or severe difficulty breathing
- Chest wall instability or deformity—e.g., Flail chest
- Spinal cord injuries
- Major burns
  - Facial burns with or without inhalation Injury
  - Extensive facial burns
  - Electrical burns
  - Second degree burns to more than 10% of the body surface
  - Third degree burns to more than 2% of the body surface
  - Burns encircling a limb
  - Major burns to the hands, feet, or genitalia
  - Chemical burns

**3. Physiological Criteria—Findings in the Primary Assessment**

- Decreased LOC (e.g., does not respond with clear speech)
- Pupillary inequality greater than 1mm and sluggish response to light with altered level of consciousness
- Airway obstruction, partial or complete
- Respiratory distress or ineffective breathing (respiratory rate of less than 10 or greater than 30)
- Any condition requiring assisted ventilation
- Cardiac arrest
- Suspected heart attack
- Obvious circulatory shock
- Major bleeding
- Acute poisoning if directed by a Poison Control Centre
- Seizure
- Stroke
- Anaphylactic reaction
- Moderate or severe hypothermia
- Heatstroke

## Transfer to EMS

First aid attendants transfer care to EMS personnel when they arrive. Specific information will be requested about the victim. The first aid attendant should provide the following information as succinctly as possible:

- The victim's name, age, and gender
- Chief complaint(s)
- What happened - history of chief complaint(s)
- Brief mention of injuries and treatment(s)
- Vitals
- Medical history
- Medication(s)
- Allergies
- Other comments such as complications, new injuries, time of last set of vital signs, etc.

## Transportation Options

The employer is responsible for determining the methods of transport to medical aid if determined necessary for the job site. Various methods include:

- Transport by workplace vehicle, ambulance, or air (i.e., helicopter).

# Shock emergency

## Cellular Function

**Shock** is an inadequate **perfusion** of the cells causing a lack of oxygen in the body. A lack of oxygen causes a loss of energy production in the cells and accumulation of harmful waste products. Should vital organs fail as a result of shock (e.g., the heart and/or brain), the body will die quickly. Any condition that impairs air exchange and oxygen transfer in the lungs will worsen shock.

## Types of Shock

There are various types and causes of shock:

1. **Hypovolemic shock** - the volume of blood in circulation becomes inadequate due to blood loss (bleeding) or fluid loss (e.g., burns, vomiting, diarrhea, dehydration).
2. **Cardiogenic shock** - the heart is damaged or weakened and does not function properly (e.g., myocardial infarction/heart attack).
3. **Anaphylactic shock** - caused by allergic reaction and expansion of blood vessels
4. **Septic shock** - caused by infections that lead to bacteria entering the bloodstream
5. **Neurogenic shock** - caused by damage to the nervous system (spinal)

## Signs and Symptoms of Shock

Many of the signs and symptoms of shock are caused by the constriction of the body's blood vessels.

- **Cool skin** - Warm blood is rerouted from the skin to the body once the blood vessels constrict.
- **Pallor** - The skin loses its normal colour (i.e., blood is no longer flowing to the surface of the body).
- **Sweating** - The sweat glands activate because of the autonomic nervous system's response to shock. The skin may be clammy or wet.
- **Increased heart rate** - The heart responds to adrenalin and noradrenalin resulting in a rapid heart rate, often a sign of severe shock.
- **Low blood pressure** - Indicates a massive loss of blood volume with the body unable to compensate.
- **Altered behaviour** - Anxiety and restlessness are associated with the release of adrenalin.
- **Thirst** - Patients in shock often complain of severe thirst.

# Circulatory emergency

## Heart Disease

**Arteriosclerosis** means hardening of the arteries. **Atherosclerosis** is a type of arteriosclerosis, characterized by plaque buildup or fatty deposits in the arteries causing them to lose elasticity and become narrower.

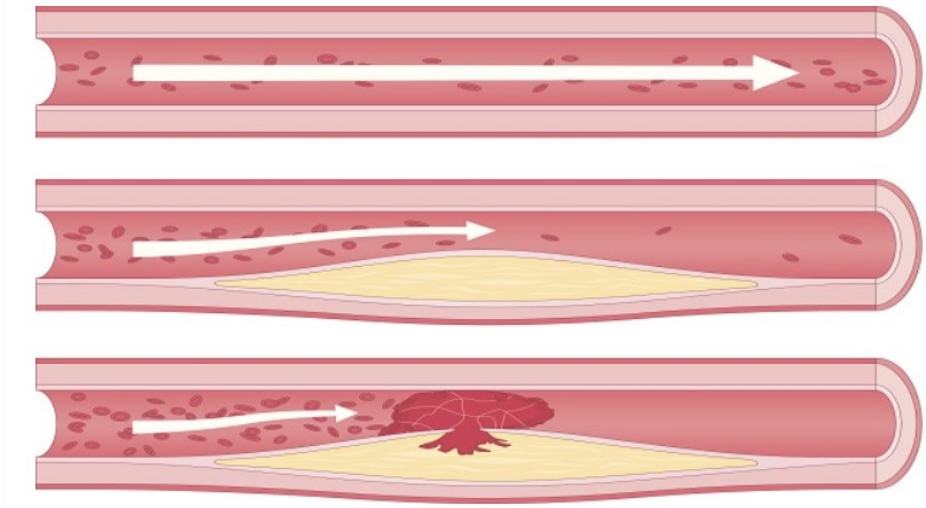
As plaque builds, the wall of the blood vessel thickens. This narrows the channel within the artery reducing blood flow, leading to less oxygen and nutrients reaching the body. Where plaque develops and the type of artery affected varies with each person.

Plaque can break off and be carried by the bloodstream until it gets stuck. Plaque that narrows an artery may lead to a blood clot that sticks to the blood vessel's inner wall. If the blocked artery supplies the heart or brain, a heart attack or stroke occurs.

## Reducing Risk

**Heart disease is preventable!** There are various ways to reduce your risk of cardiovascular disease:

1. Eat a heart-healthy diet.
2. Make time to exercise.
3. Eliminate tobacco and limit alcohol.
4. Manage weight.
5. Manage your heart conditions (e.g., cholesterol and blood pressure).
6. Manage stress.



# Respiratory emergency

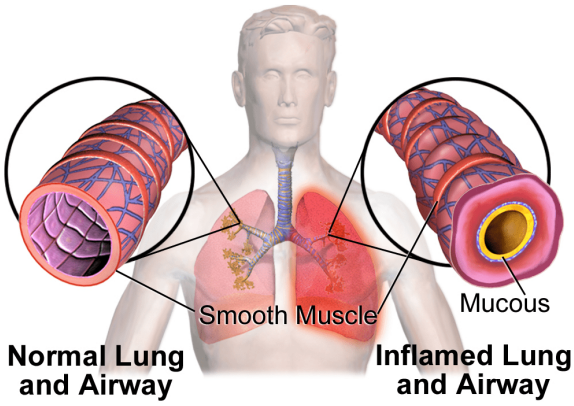
## Chronic Obstructive Pulmonary Disease (COPD)

**COPD** is a treatable, progressive lung disease that affects more than two (2) million Canadians and is a leading cause of hospitalization. Smoking is the number one cause of COPD.

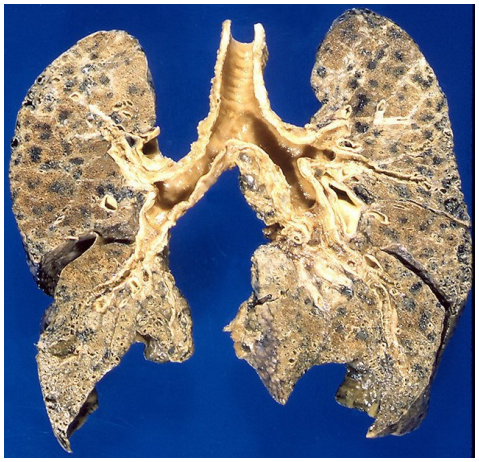
COPD is a combination of lung diseases that cause the **bronchi** in the lungs to become swollen and blocked, resulting in shortness of breath and difficulty with everyday activities. The most common conditions of COPD are chronic bronchitis and emphysema.

**Bronchitis** occurs when the bronchi become inflamed, causing severe coughing including mucus, wheezing, chest pain, and shortness of breath.

**Emphysema** develops over time and involves a gradual destruction of the alveoli (tiny air sacs in the lungs). This damage causes the air sacs to rupture to create one big air pocket instead of many small ones. This traps air in the damaged tissue and prevents oxygen from moving through the bloodstream, causing the lungs to slowly overfill and makes breathing difficult. A chronic cough is common with emphysema.




BRONCHITIS



EMPHYSEMA

## Managing COPD

Managing a COPD flareup is treatable at home if and when caught early:

1. Doctors may prescribe a fast-acting inhaler to dilate the bronchi to make it easier to breathe.
2. Prevent flareups by quitting smoking, getting vaccinated for flu, COVID-19, pneumonia, and respiratory syncytial virus. Avoid crowds and wear a mask if you're in close contact with others.
3. Stay active. Exercise helps make your lungs stronger.

# Mental health emergency

Psychological first aid is similar to physical first aid, but can be difficult to assist with because we can't see the injury or ailment the victim is experiencing. First aiders should be prepared to care for both a victim's physical and psychological well-being.

**A mental health emergency may include:**

- Risk of harm to self or others
- Anxiety or panic attacks
- **Psychosis** or altered states of mind
- Personality and/or mood disorders
- Severe depression or mania

**Signs and symptoms:**

- Physical - hyperventilation, chest pain, headache, nausea, sweating, tremors, fatigue, insomnia
- Emotional - anxiety, guilt, fear, grief, depression, feeling lost or helpless, disassociation, overwhelmed

**Treatment**

1. Follow the rescue process with special emphasis on ensuring the scene is safe for both you and the victim. Activate EMS if necessary.
2. Provide care until trained personnel can take over:

   **Care -** Care for the victim's immediate signs and symptoms

   **Comfort -** Comfort the victim by offering reassurance

   **Connect -** Connect the victim with loved ones and/or professional supports.

Victims can access mental health support through their family doctor, local hospitals or walk-in clinics, and counsellors or other trained professionals. Help lines such as the Suicide/Crisis Line and Mental Health Support Line are also available 24 hours per day.

**Suicide/Crisis Line -** 9-8-8 or 1-800-SUICIDE (1-800-784-2433)
**Mental Health Support Line -** 310-6789 (do not add an area code)

# Environmental injury

## Snow Blindness

**Snow blindness** is the eye's reaction to overexposure to UV rays. It occurs most often when the sun reflects off snow, water, ice, or sand.

**Signs and symptoms** include pain, burning, gritty feeling in eyes, sensitivity to light, swelling around eyes, temporary vision loss, and colour changes in vision.

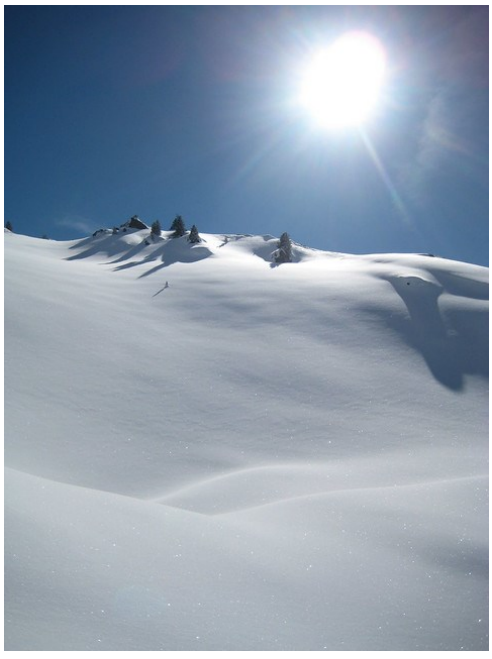
**Treatment** includes staying indoors to rest eyes from UV exposure and applying a cold, damp compress to reduce pain and burning. Snow blindness usually resolves itself over one or two days. Seek medical aid if vision is continuously affected.

## Trench Foot

**Trench foot** is an injury that occurs with prolonged exposure to cold (but not freezing) temperatures over several days. The word "trench" in the name refers to World War I where troops developed symptoms after standing in cold, wet trenches.

**Signs and symptoms** include red and swollen skin, numbness or burning, blisters or sores, leg cramps, slow or absent pulse in the foot.

**Treatment** includes rewarming the affected area and keeping dry. If blisters or sores are present, seek medical aid.



# Opioid overdose

## Opioids

**Opioid**s are a class of drugs used to reduce pain that include **hydrocodone**, **hydromorphone**, **heroin**, **oxycodone**, **fentanyl**, and **morphine**.

**Heroin** is an illegal opioid that is sniffed, snorted, smoked, or injected into a muscle or vein. It is often mixed with other drugs or substances, such as sugar or caffeine, and can appear as a white or brown powder.

**Fentanyl** is a synthetic opioid that is 50-100x more potent that morphine. Pharmaceutical fentanyl is used medically to treat severe pain. Illegally produced fentanyl has contributed to the rise in death rates as a result of overdose events.

## Public Health Emergency

On April 14, 2016, British Columbia declared a public health emergency under the *Public Health Act* following an unprecedented increase in overdose harms including death. The number of unintentional drug overdose deaths has surpassed the combined total of suicides, homicides, and deaths due to motor vehicle collisions and are now the leading cause of unnatural death in BC.

The public health emergency declaration brought a rapid expansion of community-based **naloxone** distribution, increased access to substitution drug therapies (e.g., **methadone** and **suboxone**), scaled up public education campaigns, and saw the establishment of overdose prevention services locations and supervised consumption sites.

Since 2016, BC Emergency Health Services (**BCEHS**) has seen a 119% increase in annual overdose events. In 2023, BCEHS paramedics responded to 42,172 overdose events, averaging 116 calls per day.

**Overdose calls** are tracked to determine where resources are needed. In 2023, the top BC communities with high numbers of overdose calls were:

- Vancouver - 10,526
- Surrey - 3,131
- Kelowna - 2,274
- Victoria - 2,262
- Nanaimo - 2,136
- Prince George - 1,833
- Abbotsford - 1,609
- Kamloops - 1,497

## Naloxone

Naloxone is a medication designed to rapidly reverse opioid overdose. It binds to opioid receptors and can reverse and block the effects of opioids. It can very quickly restore breathing in a person whose breathing has slowed or stopped as a result of overdosing.

The effects of naloxone last 20-90 minutes, only reversing the overdose temporarily. Immediate medical attention must be sought and subsequent doses may be needed. Naloxone will not cause harm if administered to someone who has taken a non-opioid drug.

### Accessibility

BC Centre for Disease Control's **Take Home Naloxone** program began in 2012 which provides training and naloxone kits for free to people who are either at risk of having an overdose or witnessing someone having an overdose. Naloxone kits for take home use can be found at BC emergency departments, pharmacies, correctional centres, health units, and community agencies.

The **Facility Overdose Response Box** program gives out boxes containing naloxone to community organizations to respond quickly to overdose events.

### Formulations

Naloxone is available without a prescription to anyone in British Columbia in intramuscular (i.e., injectable) and intranasal (i.e., nasal spray) formulations.

## Stocking Naloxone

Employers may decide to obtain and stock naloxone based on the likelihood that staff will encounter an individual who has overdosed and the potential consequence of not having naloxone available.

### At the Workplace

Employers should determine the likelihood of staff encountering an individual who has overdosed:

a) Do staff regularly encounter people who have overdosed?

b) Do staff regularly encounter people who may use drugs?

c) Do staff regularly encounter people in recovery from a drug-use disorder?

d) Do staff regularly encounter illegal drugs or unknown substances?

If the employer determines the likelihood of encountering someone experiencing an overdose as high, naloxone in the workplace should be considered. **First aid attendants can administer naloxone in the workplace.**

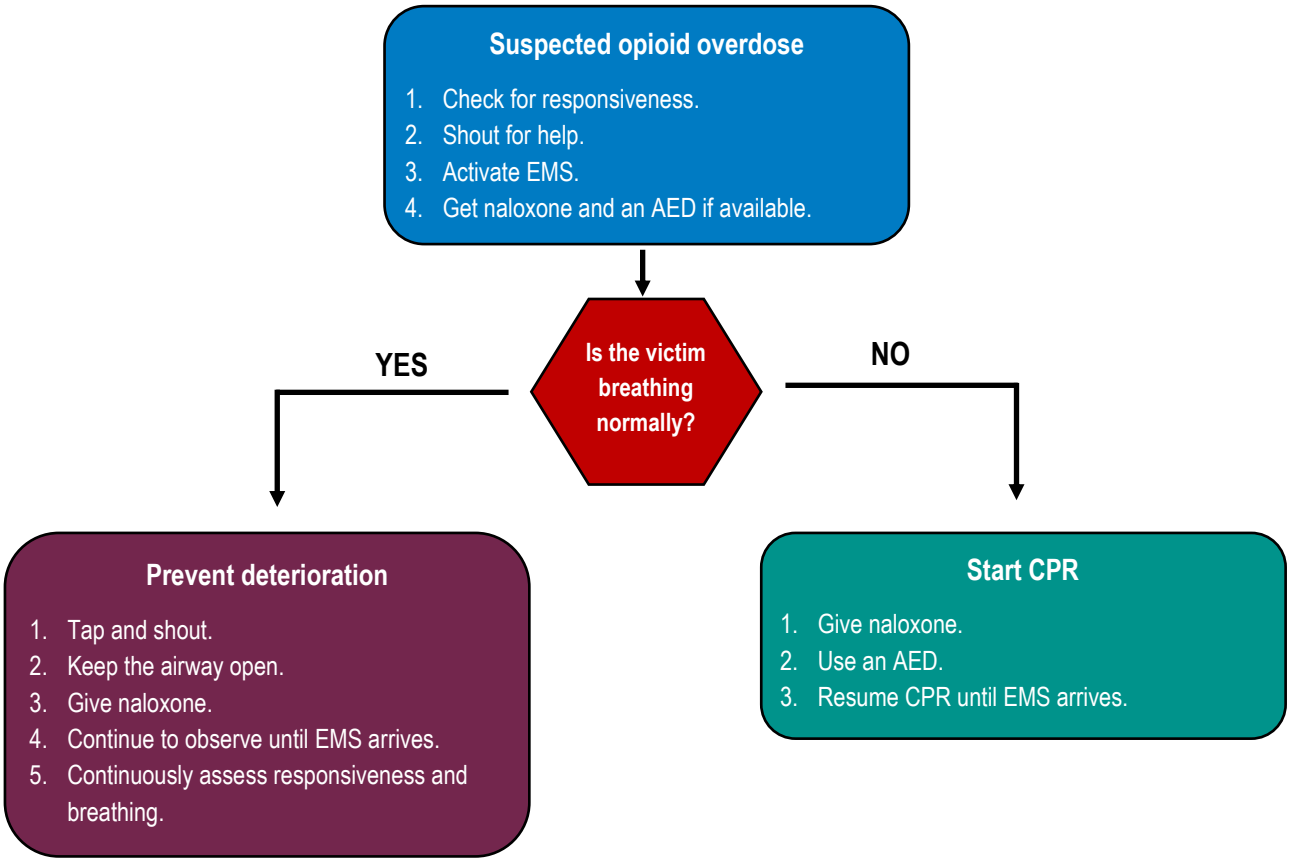
## Signs & Symptoms of Opioid Overdose

A responsive victim can exhibit a variety of signs and symptoms (e.g., difficulty waking, talking, or staying awake, dizziness, and confusion). Opioid overdose often results in **respiratory arrest** or **cardiac arrest**:

- Extreme drowsiness or unconsciousness
- Slow, irregular, or absent breathing
- Pale, cold, and clammy skin with blue lips or nails
- Constricted or very small pupils (may not be present if the victim has taken multiple drugs)

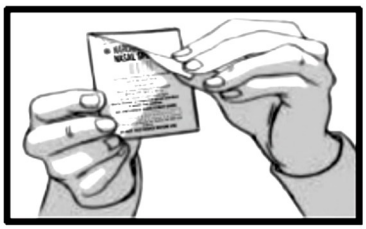
## Treatment

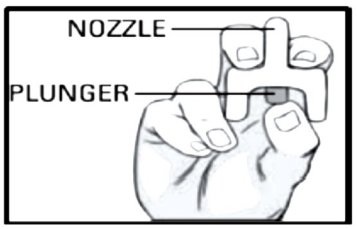
1. If possible, determine the history of the incident and assess the scene for hazards.
2. Activate EMS at the earliest possible moment.
3. Assess breathing. If breathing is present and effective, a trained responder can immediately administer naloxone. If breathing is absent or abnormal, immediately start CPR. A trained responder can administer naloxone while the first rescuer performs CPR.

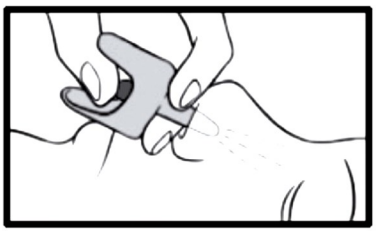


## Administration of Naloxone Nasal Spray

1. Follow the manufacturer's instructions on the packaging.
2. Do not remove or test the nasal spray until ready to use. Each spray has one (1) dose and does not need to be primed. Put on gloves.
3. Lay the victim on their back. Remove the nasal spray from the box, peel back the tab with the circle to open the nasal spray.
4. Hold the nasal spray with your thumb on the bottom of the red plunger and your first and middle fingers on either side of the nozzle.
5. Tilt the victim's head back and provide support under the neck with your hand. Gently insert the tip of the nozzle into one clear nostril until your fingers on either side of the nozzle are against the bottom of the person's nose.
6. Press the red plunger firmly to give the dose of nasal spray.
7. Remove the nasal spray from the nostril after giving the dose and put the used nasal spray back into the box.
8. Place victim into the recovery position and monitor breathing. If the victim is not breathing effectively, start or resume CPR.





## Considerations

* Store naloxone below 25˚C. Do not freeze or expose to excessive heat above 40˚C. Nasal spray freezes at temperatures below –15˚C. If it freezes, the device will not spray.
* Protect from light and keep the nasal spray in its box until ready to use.
* Replace the nasal spray before the expiration date on the packaging.
* Dispose of the used nasal spray in a place that is away from children.

# Glossary

**arteriosclerosis:** Hardening of the arteries.

**atherosclerosis:** A type of arteriosclerosis characterized by plaque buildup or fatty deposits in the arteries causing them to lose elasticity and become narrower.

**BCEHS:** British Columbia Emergency Health Services.

**bronchi**: Large air passages that lead from the trachea to the lungs.

**bronchitis:** A condition where the bronchi in the lungs become inflamed causing severe coughing including mucus, wheezing, chest pain, and shortness of breath.

**cardiac arrest:** A condition in which the heart stops beating.

**communicable diseases:** Diseases that can be transmitted between humans.

**COPD:** Chronic obstructive pulmonary disease.

**emphysema:** A condition involving the gradual destruction of the alveoli in the lungs.

**eye protection:** PPE that protects the eyes from splashes or sprays of blood and bodily fluids. It includes goggles and face shields.

**fentanyl:** A synthetic opioid used to treat severe pain that is 50-100x more potent than morphine.

**first aid attendant:** Provider of care for injured or ill workers at their site of employment.

**hand hygiene:** Washing hands thoroughly with soap and water for 20-30 seconds, using an alcohol-based hand rub, or using hand wipes that contain effective disinfectant.

**hazard:** A thing or condition that may expose a person to a risk of injury, occupational disease, or death.

**HEPA filter:** A high-efficiency particulate air filter providing a 99.97% filtration efficiency at a particle size of 0.3 micrometres.

**heroin:** An illegal opioid that is sniffed, snorted, smoked, or injected into a muscle or vein.

**hydrocodone:** An opioid prescription medication used for moderate-severe pain control and cough suppressant. Common brand names in Canada are Tussionex® and Vicoprofen®.

**hydromorphone:** A potent opioid prescription medication for managing severe chronic pain. A common brand name in Canada is Dilaudid®.

**methadone:** A synthetic addictive narcotic drug used for pain relief and as a substitute narcotic in the treatment of heroin addiction.

**minor:** In British Columbia, anyone under the age of 19.

**morphine:** A potent opioid prescription medication for managing severe and chronic pain. Common brand names in Canada are Doloral®, Statex®, and M.O.S®.

**naloxone:** A medication designed to rapidly reverse opioid overdose. It binds to opioid receptors and can reverse and block the effects of opioids.

**opioids:** A highly controlled class of drugs used to treat acute and chronic pain and control persistent cough or diarrhea. The use of prescription opioids can result in addiction and overdose death.

**oxycodone:** An opioid prescription medication used as a pain reliever for moderate-severe pain and as palliative care for the terminally ill. Commonly known as Percocet®, Percodan®, Supeudol®, OxyIR®, or OxyContin®.

**pallor:** When the skin loses its normal colour (i.e., blood is no longer flowing to the surface of the body).

**perfusion:** The pumping of a fluid through an organ or tissue.

**psychosis:** A term used to describe conditions in which people have trouble distinguishing between what is real and what is not.

**respiratory arrest:** The state in which one stops breathing.

**risk:** The chance that someone could be harmed by a hazard. Risk can be categorized as high, medium, or low, based on the likelihood and potential seriousness of harm.

**risk matrix:** A tool to help determine the level of risk in a workplace.

**RTC:** Rapid Transport Criteria

**SDSs:** Safety Data Sheets

**shock:** An inadequate perfusion of the cells causing a lack of oxygen in the body.

**snow blindness:** An injury in which the eyes react to an overexposure to UV rays.

**suboxone:** An opioid medication composed of both buprenorphine and naloxone used to treat addiction to opioids.

**trench foot:** An injury that occurs with prolonged exposure to cold (but not freezing) temperatures over several days.

**triage:** To perform a preliminary assessment of multiple victims to determine the nature and degree of urgency of treatment required.

**WHMIS:** Workplace Hazardous Materials Information System

**WorkSafeBC:** Workers' Compensation Board of British Columbia

**zoonotic disease:** A disease that can be transmitted from animals to humans.

# References


BC Centre for Disease Control. (n.d.) *Opioid overdose emergency snapshot* [PDF].

BC Emergency Health Services. (2024). *Overdose & drug poisoning data* [webpage].

BC Emergency Health Services. (2024). *Overdose response in BC communities* [PDF].

Canadian Centre on Substance Use and Addiction. (2020). *Prescription opioids* [PDF].

Canadian Lung Association (2024). *Chronic obstructive pulmonary disease (COPD)* [webpage].

*Good Samaritan Act, RSBC 1996,* c.172.

*Good Samaritan Drug Overdose Act, S.C. 2017,* c.4.

Government of British Columbia: Ministry of Mental Health and Addictions. (n.d.). *Escalating BC's response to the overdose emergency* [PDF].

Heart & Stroke Foundation of Canada (2024). *Atherosclerosis* [webpage].

*Infants Act (Medical Treatment), RSBC 1996,* c.223.

Lifesaving Society Canada: BC & Yukon Branch (2023). *2020 First aid & resuscitation update guide* [PDF].

*Workers Compensation Act (Occupational Health and Safety Regulation),* BC Reg 296/97.

WorkSafeBC. (2018). *Occupational first aid: A reference and training manual.* WorkSafeBC.

WorkSafeBC. (2019). *WHMIS 2015: The basics* [PDF].

WorkSafeBC. (2022). *Creating and managing a healthy and safe workplace* [PDF].

WorkSafeBC. (2021). *Controlling exposure: Protecting workers from infections disease* [PDF].

WorkSafeBC. (2024). *Workplace hazard ratings* [PDF].

# Notes

# Notes

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