



# First Aid & CPR





# **First Aid & CPR**

# Land Acknowledgement

The Canadian Red Cross acknowledges the Indigenous Peoples, the traditional stewards of the land now known as Canada. The Indigenous Peoples, including First Nations, Métis, and Inuit Peoples, have been caretakers of this land since time immemorial. As an organization committed to reconciliation, we give thanks for the deep learnings and understanding this relationship entails. We endeavour to be guided by this learning as we walk alongside Indigenous Peoples and communities.

## Acknowledgements

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The Canadian Red Cross Society (CRCS) has made reasonable efforts to ensure the contents of this publication are accurate and reflect the latest scientific research available on the topic as of the date published. The information contained in this publication may change as new scientific research becomes available. Certain techniques described in this publication are designed for use in life-saving situations. However, the CRCS cannot guarantee that the use of such techniques will prevent personal injury or loss of life.

This publication is available in English and French.

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# Table of Contents

<b>1</b>	<b>The Red Cross.....</b>	<b>4</b>	<b>8</b>	<b>Wound Care.....</b>	<b>34</b>
<b>2</b>	<b>Responding to Emergencies .....</b>	<b>5</b>		Bandaging Guidelines .....	34
	Preparing to Respond .....	5		Cuts and Scrapes .....	34
	First Aid Kit.....	5		Burns .....	35
	Legal Issues .....	6		Bruises .....	37
	After an Emergency.....	7		Splinters.....	38
	Lowering the Risk of Infection .....	8		Nosebleeds .....	38
	Equipment Precautions.....	8		Knocked-Out Teeth .....	39
	Removing Gloves .....	8		Eye Injuries .....	40
	Handwashing .....	9		Ear Injuries .....	41
<b>3</b>	<b>Check, Call, Care .....</b>	<b>10</b>		Impaled Objects.....	41
	Check .....	11		Chest Injuries.....	42
	ABCs.....	12		Abdominal Wounds .....	43
	Call .....	13	<b>9</b>	<b>Head, Neck, Spine, and</b>	
	Care.....	13		<b>Pelvis Injuries.....</b>	<b>44</b>
	Recovery Position .....	14		Concussion .....	45
	Medication .....	14	<b>10</b>	<b>Bone, Muscle, and Joint Injuries.....</b>	<b>47</b>
	Secondary Assessment .....	15		Splints and Slings.....	48
	SAMPLE Questions.....	15		Regular Sling .....	49
	Vital Signs .....	15		Tube Sling.....	50
	Injury Check.....	15	<b>11</b>	<b>Sudden Medical Emergencies.....</b>	<b>51</b>
	Shock .....	17		Diabetic Emergencies .....	51
<b>4</b>	<b>Choking .....</b>	<b>18</b>		Seizures.....	52
	Adult or Child .....	18		Mental Health Emergency.....	53
	By Yourself .....	19	<b>12</b>	<b>Environmental Illness .....</b>	<b>55</b>
	Baby .....	20		Heat-Related Illnesses.....	55
<b>5</b>	<b>Circulation Emergencies .....</b>	<b>21</b>		Cold-Related Illnesses .....	56
	Heart Attack .....	21		Frostbite .....	56
	Stroke .....	22		Hypothermia .....	58
	Life-Threatening External			Trench Foot .....	59
	Bleeding .....	23	<b>13</b>	<b>Poisons.....</b>	<b>60</b>
	Applying a Tourniquet.....	24		Carbon Monoxide Poisoning.....	61
	Life-Threatening Internal			Poison Ivy, Sumac, and Oak.....	62
	Bleeding .....	25		Giant Hogweed and Wild	
<b>6</b>	<b>CPR and AED .....</b>	<b>26</b>		Parsnip.....	62
	CPR .....	26		Alcohol or Drugs.....	63
	Compression-Only CPR .....	26		Opioid Poisoning .....	63
	Adult or Child.....	27		Insect Stings .....	66
	Baby.....	28		Animal Bites .....	67
	When Rescue Breaths Don't			Spider Bites .....	67
	Go In .....	29		Tick Bites.....	68
	AED.....	30		Snakebites .....	68
<b>7</b>	<b>Breathing Emergencies.....</b>	<b>31</b>		Stings From Marine Life.....	69
	Asthma.....	31	<b>14</b>	<b>Marine Basic First Aid .....</b>	<b>70</b>
	Using an Inhaler.....	32		Cold-Water Immersion.....	70
	Anaphylaxis .....	33		Seasickness .....	71
				<b>Foundations of First Aid .....</b>	<b>72</b>



# 1

# The Red Cross

## The Fundamental Principles

**Humanity:** We serve people, but not systems.

**Impartiality:** We care for the victims and the aggressors alike.

**Neutrality:** We take initiatives, but never take sides.

**Independence:** We bow to needs, but not rulers.

**Voluntary Service:** We work around the clock, but never for personal gain.

**Unity:** We have many talents, but a single idea.

**Universality:** We respect nations, but our work knows no bounds.

## Red Cross Symbols



There are three official symbols (red cross, red crescent, and red crystal) used to identify the International Red Cross and Red Crescent Movement. These symbols are recognized around the world as signs of protection and neutrality.

## How We Help

The Canadian Red Cross is always evolving to meet the needs of people who have been affected by emergencies or changing trends in society.





# 2 Responding to Emergencies

## Preparing to Respond First Aid Kit

Keep a well-stocked and regularly inspected first aid kit in your home, car, and workplace.



## Willingness to Act

Sometimes people don't want to get involved in an emergency. The five most common reasons are:

- 1. The Bystander Effect:** "Someone else will look after the person." Never assume that someone will take action. Offer to help in any way you can.
- 2. Unpleasant injuries or illnesses:** "That makes me feel sick!" Close your eyes or turn away for a moment to calm yourself, then deal with the situation.
- 3. Fear of catching a disease:** "I don't want to get sick!" Taking simple steps, such as wearing gloves, will limit the risk of catching a disease.
- 4. Fear of doing something wrong or causing more harm:** "What if I make the person worse?" The most harmful thing you can do is nothing at all.
- 5. Stigma/Bias:** "I have a negative reaction to something about this person." Focus on the person's immediate need for care, rather than any biases, and you can make a life-saving difference.





# Legal Issues Around First Aid

First Aiders must:

- Get permission, if possible, before giving care.
- Give only the care they were trained to provide.
- Continue giving care until another trained person takes over, they are too exhausted to continue, the scene becomes unsafe, or the person's condition improves and care is no longer required.

## Workplace First Aid

First aid in the workplace can be governed by both national and provincial or territorial legislation. If you are employed as a workplace first aid attendant, you have a duty to act. You should be familiar with the legislation for the region you are working in.

## Getting Permission to Help

You must get permission (consent) before giving care.

- For an unresponsive person, the law assumes you have permission.
- For a young child without a caregiver, provide care.
- If a person refuses care, call EMS/9-1-1.



## Duty to Report Child Abuse or Neglect

Every adult in Canada has a legal duty to report child abuse or neglect, even if it is not confirmed. Information around the specific how-to-report details can be found in your jurisdiction's child protection act, but the duty to report is uniform in all acts. If you think a child is being harmed, then a report to child protection and/or the police needs to occur.



## Your Role as a First Aider

1. Recognize the emergency.
2. Protect yourself and others.
3. Access help (one of the simplest and most important ways of providing first aid).
4. Act according to your skills and training.

## The Emergency Medical Services System

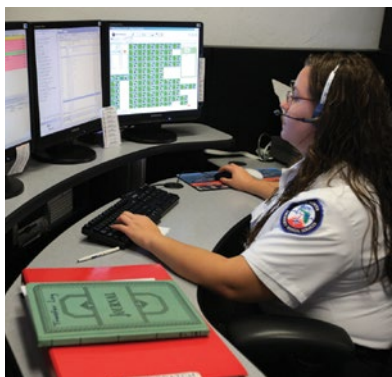
The emergency medical services (EMS) system is a network of community resources and trained personnel organized to give emergency care in cases of injury or sudden illness.



## When to Call EMS/9-1-1

Call EMS/9-1-1 if there is a danger to you or others or if a person:

- Is unresponsive or has an altered mental state.
- Is not breathing normally.
- Has persistent chest pain or pressure.
- Has life-threatening bleeding.
- Has a seizure.
- Has a head, neck, back, or pelvis injury.
- Has an apparent mental health emergency.
- Is not easily accessible or cannot be transported safely.



You should call EMS/9-1-1 any time that you're in doubt.

## After an Emergency

Being involved in an emergency and providing first aid can be stressful. After the emergency is resolved, you may have lingering feelings such as uneasiness, doubt, anxiety, and fear. It is often helpful to talk to somebody about the situation.

Consider seeking professional help (such as from your family doctor or mental health professional) if you experience any of the following for more than two weeks after the emergency:

- Crying fits or uncontrollable anger
- Trouble eating or sleeping
- Loss of engagement with former interests
- Feelings of guilt, helplessness, or hopelessness
- Avoiding family and friends
- Ignoring daily tasks, such as going to work



# Lowering the Risk of Infection

## Equipment Precautions

“Personal protective equipment” (“PPE”) are items that protect you from contact with germs. Examples include barrier devices such as safety glasses, goggles, face masks, CPR breathing barriers, and gloves. You should always use some type of barrier device when giving first aid.



## Removing Gloves

1. Touching only the outer surface, pull the glove off your hand, form it into a ball, and hold it in the palm of your gloved hand.



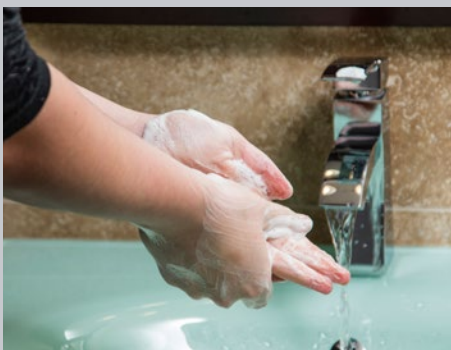
2. Insert your fingers under the rim of the glove on your other hand.



3. Pull the glove off the hand, trapping the balled glove inside, and discard appropriately.



4. Wash your hands properly.







## Handwashing

1. Take off your jewellery, wet your hands, and then apply soap.



2. Rub your hands together for at least 30 seconds and rinse.



3. Dry with a towel.



4. If you are in a public washroom, turn the faucet off using the towel.



If handwashing facilities are not available, use an alcohol-based hand sanitizer to clean your hands.



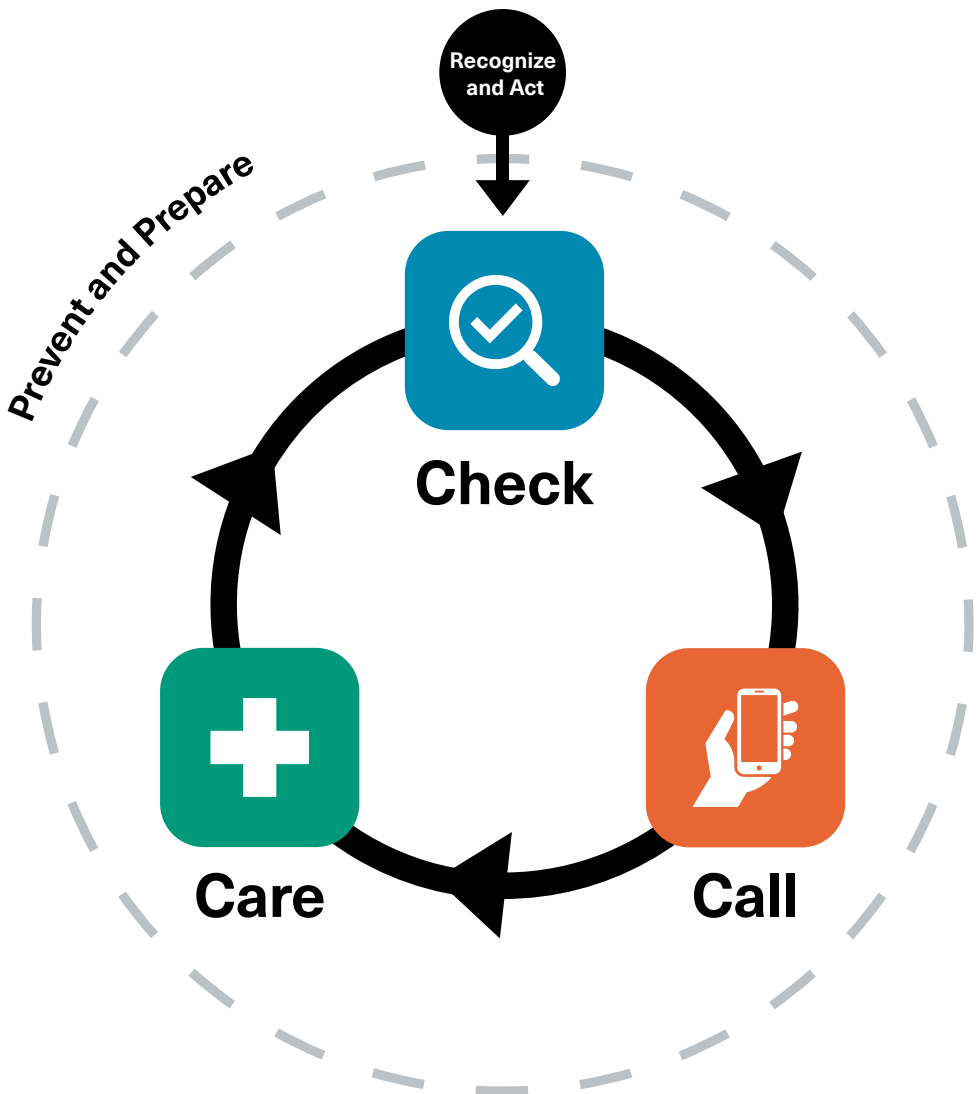
Clean under your fingernails by rubbing them against the palms of your hands. Be sure also to scrub your palms and wrists, the skin between your fingers, and the backs of your hands.



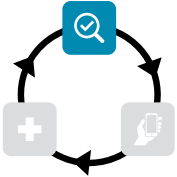
# 3

## Check, Call, Care

When you encounter an ill or injured person, you will repeat the Check, Call, and Care steps until the person's condition improves or EMS personnel arrive.







## Check

Once you recognize an emergency, you must first check the scene, and then check the person.

### ***Check the Scene***

Before approaching an ill or injured person, stop and take a good look at the scene:

- Is the scene safe?
- Are there any hazards?
- What happened?
- How did it happen?
- How many ill or injured people are there?
- Is there someone to help you?



### ***Check the Person (Primary Assessment)***

If the scene is safe, quickly check the person:

1. Check whether the person is responsive.
2. Check the person's ABCs:
  - Airway
  - Breathing
  - Circulation



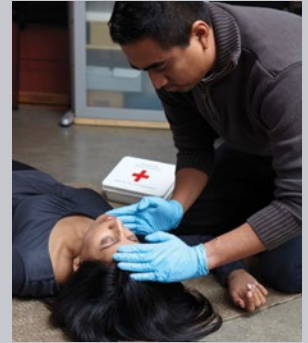


## Checking ABCs

### A = Check the Airway

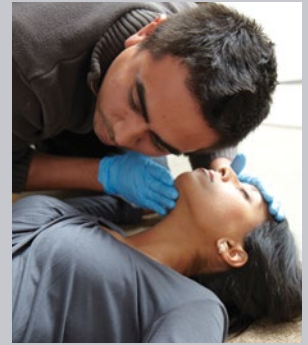
Make sure the person has an open airway. If the person is speaking, moaning, or crying, the person's airway is open.

If the person is unresponsive, perform a head-tilt/chin-lift by gently tilting the head back until the chin is pointing up.



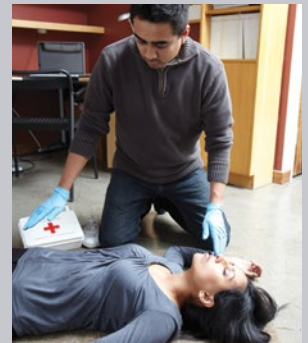
### B = Check Breathing

Check for normal breathing for 5 to 10 seconds. A person is breathing normally if air is moving into and out of the lungs and the chest is rising and falling in a normal, regular pattern. Someone who can speak or cry is breathing.



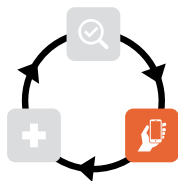
### C = Check Circulation

Quickly look at the person from head to toe for signs of life-threatening bleeding.



A person who is not breathing normally may be occasionally gasping for air: This is a reflex action called “agonal respiration.” Unlike normal breathing, it is irregular and sporadic. Care for the person as if they are not breathing.

Unresponsiveness, difficulty breathing, and life-threatening bleeding are life-threatening emergencies. These conditions must be your top priority. Obtain an automated external defibrillator (AED) and first aid kit if these items are available.

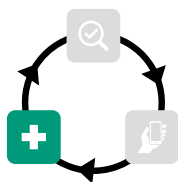
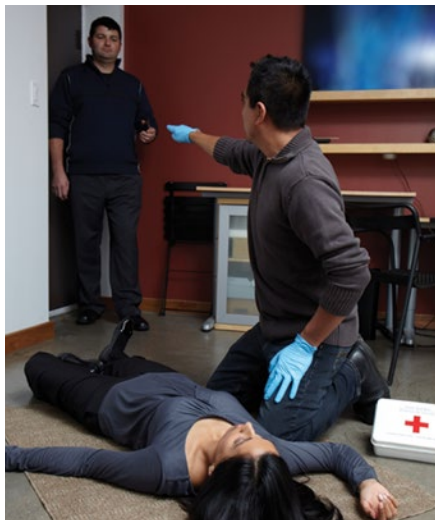


## Call

If an individual is unresponsive or has a life-threatening condition, you must always activate EMS. Whenever possible, use a mobile phone or ask a bystander to call EMS/ 9-1-1.

If you are alone with the person and you do not have a mobile phone, call out loudly for help. If no one comes, get to a phone as quickly as you can and call EMS/9-1-1. As soon as you hang up, return to the person.

If a person becomes unresponsive, their vital signs deteriorate, or your secondary assessment reveals a condition that requires emergency care, call EMS/9-1-1 immediately.



## Care

Care for any life-threatening conditions first. Give the care that is needed, within the scope of your knowledge and training. Continue to Check, Call, and Care, providing continual care with these guidelines:

- Monitor the person's breathing, level of responsiveness, and overall condition.
- Help the person rest in a comfortable position.
- If necessary, roll the person into the recovery position.
- Keep the person from getting chilled or overheated.
- Reassure the person.





## Recovery Position

A person who is unresponsive or has an altered level of responsiveness should be rolled into the recovery position.



When placing a person in the recovery position, remember:

- Support and protect the head while rolling the person.
- Try to roll the person as one unit (head, back, and legs at the same time).
- Roll the person into a position where the body will stay safely on its side.
- Check the ABCs after you complete the roll.

## Helping a Person With Medication

You should help a person take their medication only if:

- It is safe to do so,
- The person is responsive,
- And the person has in some way expressed a need for help finding or preparing the medication.

### Finding the Medication

Find the medication and review all information on the package, including the name of the medication, any instructions or warnings, and, in the case of prescription medication, the person's name.

### Preparing the Medication

Follow the instructions on the label to prepare the medication for the person to ingest, inhale, or inject.

### Guiding the Person in Taking the Medication

Guide the person in taking the medication by reading the instructions to the person and/or showing the person how to take the medication.

### Giving Life-Saving Medication

Giving, or "administering," medication means directly delivering it for the person. For First Aiders, this usually means putting it in their mouth, spraying it into their mouth or nose, or injecting it. You should only administer medications if they are life-saving medications, such as asthma inhalers, epinephrine auto-injectors, or naloxone.



## Secondary Assessment

Once you are confident that all life-threatening conditions have been addressed, perform a secondary assessment to check for conditions that may not be as obvious. The secondary assessment consists of three steps:

### 1. Ask **SAMPLE** Questions

Interview the ill or injured person and any bystanders at the scene using the acronym SAMPLE to guide your questions:

**S**igns and symptoms

**A**llergies

**M**edications

**P**ast medical history

**L**ast oral intake (food or drink)

**E**vents leading up to the emergency



### 2. Check the **Vital Signs**

#### Level of Responsiveness

Is the person alert, sleepy, or confused? Is the person's responsiveness changing?

#### Breathing

Listen for sounds. Is the breathing fast or slow? Shallow or deep? Painful?

#### Skin

Is skin dry or wet? An unusual colour or temperature?

### 3. Perform an **Injury Check**

Look carefully for injuries that were not identified during the primary assessment. An injury check may involve a focused examination or a hands-on check. If you find a medical-identification product during your check, read it carefully.



## Focused Examination

If the person is responsive and able to answer questions, do a focused examination. If the person's condition deteriorates, respond immediately (e.g., call EMS/9-1-1, provide care).

1. Explain that the purpose of the examination is to identify injuries.
2. Ask the person if anything hurts or feels uncomfortable.

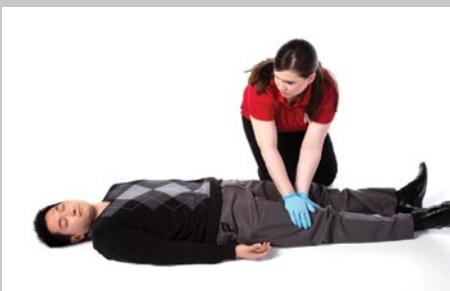


3. If the person indicates an area of pain or concern, look at the area for signs of injury.
4. Ask focused questions about how the person feels.



## Hands-On Check

If a person is breathing but unresponsive or unable to communicate, you may need to do a hands-on check. Begin by checking the head for injuries, and then work downward, focusing on the chest, abdomen, and legs before checking the arms.





# Shock

Be on the lookout for shock when providing care for any injury or sudden illness or whenever someone has been involved in a serious incident. Shock is a life-threatening condition.

## What to Look For

The following are signs and symptoms of shock:

- Anxiety or confusion
- Cool, clammy skin that may be a different colour than usual
- Weakness
- Excessive thirst
- Rapid breathing
- Drowsiness or loss of responsiveness
- Nausea and vomiting



### Call

Call EMS/9-1-1.



### Care

People in shock need medical care. Call EMS/9-1-1 if you haven't already done so. While you are waiting for EMS personnel to arrive:

1. Care for the suspected cause of the shock.
2. Provide continual care.





# 4 Choking

If the person is able to cough or speak, their airway is not completely blocked. Encourage the person to cough and be prepared to provide care if the person stops coughing. If the person's airway is completely blocked, you must begin first aid immediately.



## *Adult or Child*



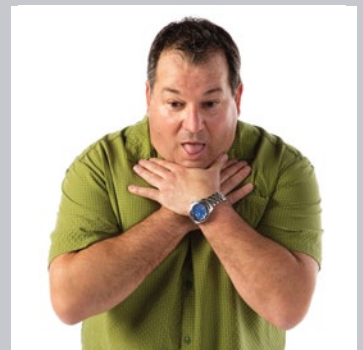
### Call

Immediately begin providing care. Call EMS/9-1-1 as soon as you or a bystander is able to do so.



### Care

1. Alternate between any two of the following methods until the object comes out: back blows, abdominal thrusts, and chest thrusts.



2. If the choking person becomes unresponsive, ensure that EMS has been called and begin CPR, starting with chest compressions.





## Back Blows

1. Place your arm across the person's chest.
2. Bend the person forward and deliver up to 5 firm blows between the shoulder blades.



## Abdominal Thrusts

1. Place your fist just above the belly button.
2. Give up to 5 quick, inward and upward thrusts.



## Chest Thrusts

1. Place your fist in the middle of the person's chest with your thumb facing inward, and place your other hand over your fist.
2. Give up to 5 chest thrusts by pulling straight back.



## *If You Are by Yourself and Choking*

1. Dial EMS/9-1-1 and move to a place where you can be noticed.
2. Attempt to dislodge the object by performing abdominal thrusts against a safe object.





## Baby



## Call

Immediately begin providing care for choking. Call EMS/9-1-1 as soon as you or a bystander is able to do so.



## Care

1. Sit or kneel with the baby face-down along your forearm, holding the jaw in your hand but keeping the mouth clear.
2. Deliver 5 firm back blows.



3. If the object does not come out, turn the baby face-up, ensuring you support the head.



4. Place 2 fingers in the middle of the chest and deliver 5 firm chest compressions.
5. Repeat the back blows and chest compressions until the object comes out or the baby begins to breathe normally or cry.
6. If the baby becomes unresponsive, immediately begin CPR, starting with chest compressions.





# 5 Circulation Emergencies

## Heart Attack

A heart attack occurs when the heart cannot get enough oxygen because of a blockage in one of the arteries that feed it.

### What to Look For

Classic signs of a heart attack are pain, pressure, tightness, or heaviness in the chest, or pain radiating from the chest to the arm(s), shoulder(s), back, jaw, and/or neck. A person may also experience:

- Shortness of breath
- Nausea or vomiting
- Feelings of anxiety, denial, or impending doom
- Skin, lips or fingers that are a different colour than usual
- Unresponsiveness
- Cool, sweaty skin

“Soft” signs of a heart attack include:

- Mild, unfocused chest discomfort
- Extreme fatigue (tiredness)
- Flu-like symptoms
- Gastric discomfort, nausea, or vomiting
- Dizziness or light-headedness



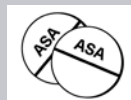
### Call

Call EMS/9-1-1 and get an AED immediately.



### Care

1. Have the person rest quietly.
2. Have the person **chew** either 1 regular-strength or 2 low-dose acetylsalicylic acid (ASA) tablets.



Other painkilling medications such as acetaminophen (e.g., Tylenol®) or ibuprofen (e.g., Advil®) do not have the same effect as ASA in reducing damage due to heart attacks. Do not substitute ASA with acetaminophen or ibuprofen.



Nitroglycerin is a medication used to relieve chest pain. It is commonly prescribed as an oral spray.





# Stroke

A stroke happens when the blood flow to part of the brain is interrupted. A person of any age can have a stroke.

## What to Look For

- A sudden, severe headache
- Dizziness or confusion
- Unresponsiveness or temporary loss of responsiveness
- Sudden loss of bladder or bowel control
- Vision problems in one or both eyes



## FAST

When trying to determine if a person is having a stroke, remember the acronym FAST:

**F**ace—facial numbness or weakness, especially on one side

- Ask the person to smile. Look for crookedness or drooping.

**A**rm—arm numbness or weakness, especially on one side

- Ask the person to close their eyes, put out both arms, and face their palms up. Look for sagging or drifting.

**S**peech—abnormal speech, difficulty speaking or understanding others, or a loss of speech

- Ask the person or the people that they are with if their speech has changed.

**T**ime—time is important; call EMS/9-1-1 immediately

- Try to find out when the symptoms started.



## Call

Call EMS/9-1-1 and get an AED.



## Care

1. Have the person rest in a comfortable position.
2. Note when the signs and symptoms first started (or the last time the person was known to be well).





# Life-Threatening External Bleeding

Life-threatening external bleeding is bleeding that is difficult to stop or control.



## Call

Immediately apply direct pressure and then call EMS/9-1-1.



## Care

1. Apply firm, direct pressure to the wound.



2. While maintaining direct pressure, apply a dressing and bandage it in place.



3. If blood soaks through the bandage, apply another bandage on top.



4. If direct pressure does not control the bleeding, consider using a tourniquet.

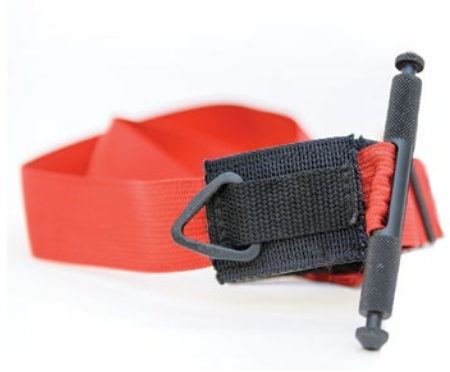




## Applying a Tourniquet

The following situations may require a tourniquet:

- The bleeding cannot be controlled using direct pressure.
- You are unable to access the wound.
- You must move the person and are unable to maintain direct pressure.



1. Apply the tourniquet: It should be 5 to 10 cm (2 to 4 in.) above the injury and at least 2.5 cm (1 in.) above any joint.



2. Tighten the tourniquet until the bleeding stops.



3. Secure the tourniquet in place.



4. Document the time the tourniquet was tightened.



If a commercial tourniquet is not available, a tourniquet can be improvised from everyday objects (e.g., a triangular bandage and a marker).







# Life-Threatening Internal Bleeding

## What to Look For

- Bruising and pain in the injured area
- Soft tissues that are tender, swollen, or hard
- Blood in saliva or vomit
- Severe thirst, nausea, or vomiting
- Anxiety



### Call

Call EMS/9-1-1 and get an AED.



### Care

1. Have the person rest quietly until EMS personnel arrive.



A person with life-threatening internal bleeding may be very thirsty, but giving anything by mouth (even water) can cause serious complications.



# 6 CPR and AED

## Cardiopulmonary Resuscitation (CPR)

CPR is used when a person is unresponsive and not breathing.



### Call

Have someone call EMS/9-1-1 and get an AED.

### Adult

If you are alone, call EMS/9-1-1 and get an AED yourself.



### Child or Baby

If you are alone, do 5 cycles (2 minutes) of CPR before taking the child or baby with you to call EMS/9-1-1 and get an AED.

## Compression-Only CPR

Compression-only CPR uses chest compressions (without rescue breaths) to pump the heart. If you are unwilling or unable to give rescue breaths for any reason, compression-only CPR is acceptable. Traditional CPR with rescue breaths is the recommended method of care for children and babies.





## Adult or Child

### 1. Do 30 chest compressions:

- Put your hand(s) in the centre of the person's chest: 2 hands for an adult, 1 or 2 hands for a child.
- Push deeply and steadily, allowing the chest to recoil between compressions.



### 2. Give 2 breaths:

- Open the airway.
- Place your barrier device over the person's mouth and nose, and if using a flat plastic shield, pinch the person's nostrils.
- Give just enough air to make the chest start to rise.



### 3. If both breaths go in, repeat the cycle of 30 compressions and 2 breaths.



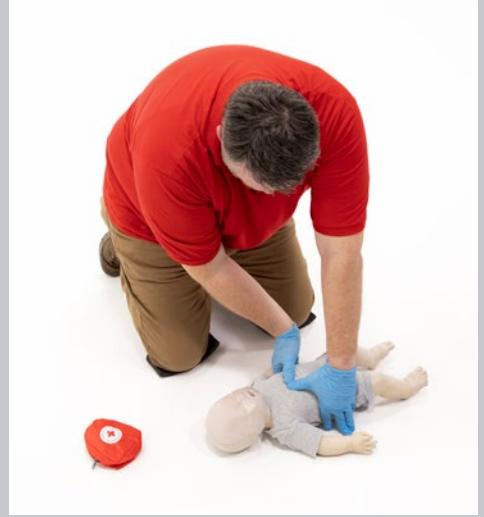
You should do compressions at a rate of 100 to 120 per minute. This works out to 30 compressions in about 15 to 18 seconds.



## ***Baby (Less Than 1 Year)***

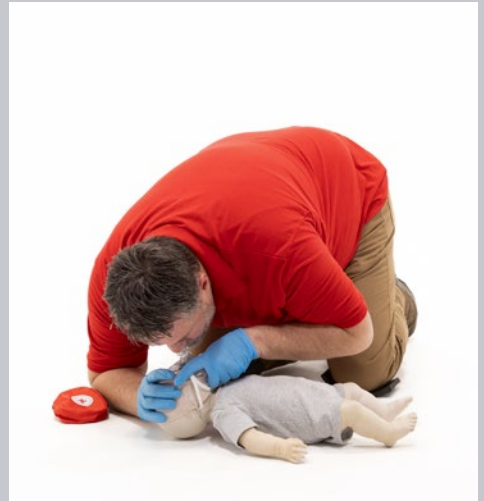
### **1. Do 30 chest compressions:**

- Put 2 fingers in the centre of the baby's chest, or put your hands around the baby with both thumbs on the middle of the baby's chest.
- Push deeply and steadily, allowing the chest to recoil between compressions.



### **2. Give 2 breaths:**

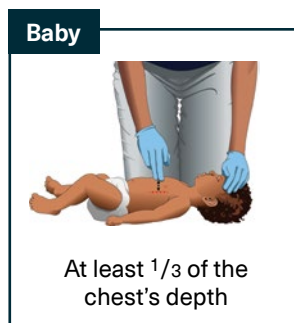
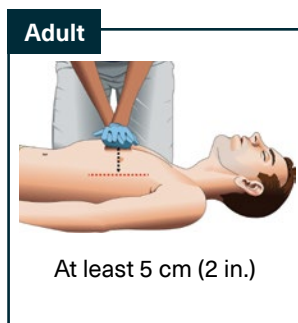
- Open the airway.
- Place your barrier device over the baby's mouth and nose.
- Give just enough air to make the chest start to rise.



### **3. If both breaths go in, repeat the cycle of 30 compressions and 2 breaths.**



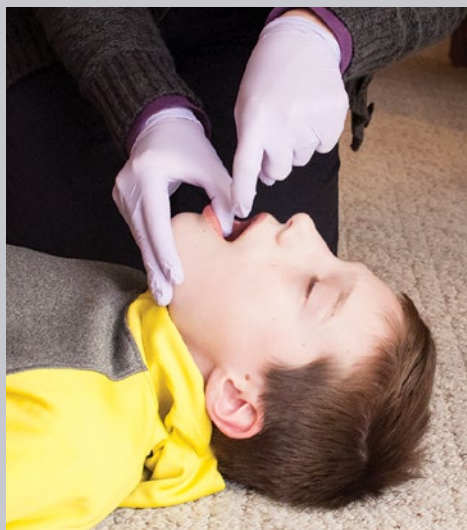
## CPR Compression Depth



Once you begin CPR, continue until:

- EMS personnel or another person takes over.
- You are too tired to continue.
- The scene becomes unsafe.
- You notice an obvious sign of life, such as movement.

### *What to Do If the Rescue Breaths Don't Go In*



If the chest does not start to rise after the first breath, reposition the head and try to give another breath. If it doesn't go in, do 30 chest compressions and then look into the person's mouth. If you see an object, carefully remove it.

Try to give 1 breath. If it goes in, give a second breath and then proceed with CPR. If the breath does not go in, repeat the process of doing 30 compressions, checking the person's mouth, and attempting breaths until the breaths go in or EMS personnel take over.



## Automated External Defibrillation (AED)

Whenever you give CPR, you should also use an automated external defibrillator (AED). While CPR can help prevent brain damage and death by keeping oxygenated blood moving throughout the body, an AED can correct the underlying problem for some people who go into sudden cardiac arrest.

### Using an AED

#### 1. Open and turn on the AED.



If possible, use the appropriate size of pads—adult, child, or baby. Pads must be placed at least 2.5 cm (1 in.) apart. If there is not enough space on the chest, place one pad on the chest and one on the back.

#### 2. Apply the AED pads:

- Remove any clothing and medical patches that could interfere with pad placement.
- If the chest is wet, dry the skin.
- Place the pads at least 2.5 cm (1 in.) away from a pacemaker.



#### 3. Follow the AED's automated prompts.

- #### 4. If the AED prompts you to do so, ensure that no one is touching the person and deliver a shock.



#### 5. Continue CPR, starting with compressions.



You must remove a person from water before using an AED. It is safe to use an AED on ice or snow.



# 7 Breathing Emergencies

## Asthma

Many people have asthma, a condition that can make breathing difficult. Asthma is normally triggered by something, such as dust, stress, or exercise.

### What to Look For

- Trouble breathing (gasping for air, wheezing or coughing, or rapid, shallow breathing)
- Inability to say more than a few words without pausing to breathe
- Tightness in the chest



### Call

Call EMS/9-1-1 and get an AED if the person is struggling to breathe or does not improve after taking their medication.



### Care

1. If you think that something in the environment is triggering the attack, move the person away from the trigger.
2. Help the person to take their quick-relief asthma medication.







## ***Using an Inhaler***

Guide the person through these steps:

1. Shake the inhaler and remove the cap.
2. Breathe out as much air as possible, away from the inhaler.



3. Bring the inhaler to the mouth and close the mouth around the mouthpiece.
4. Press the top of the inhaler while taking one slow, full breath.
5. Hold the breath for as long as is comfortable.



## ***Using an Inhaler With a Spacer***

Guide the person through these steps:

1. Shake the inhaler and remove the cap.
2. Put the inhaler into the spacer.



3. Bring the spacer to the mouth and press the top of the inhaler.
4. Take slow, deep breaths, holding each breath for several seconds.



If the person is unable to administer their prescribed quick-relief asthma medication themselves and has indicated they need help, you can administer it for them.



# Anaphylaxis

Anaphylaxis is a severe allergic reaction that can be life-threatening.



## What to Look For

A person with signs and symptoms from two or more of these categories—especially after contact with a possible allergen—should be treated for anaphylaxis:

- Skin (e.g., rash, swelling)
- Breathing (e.g., high-pitched noises)
- Alertness (e.g., dizziness)
- Stomach (e.g., vomiting)



## Call

Call EMS/9-1-1 and get an AED.



## Care

If the person has an epinephrine auto-injector, guide them through these steps for using it:

### 1. Remove the safety cap.



### 2. Firmly push the tip of the epinephrine auto-injector against the outer thigh. A click should be heard. Hold in place as directed, usually for 5 to 10 seconds.



### 3. Rub the injection site for 30 seconds.

### 4. If the person's condition does not improve within 5 minutes, repeat the dose.

### 5. Have the person rest quietly until EMS personnel arrive.



If the person is unable to administer their prescribed epinephrine auto-injector themselves and has indicated they need help, you can administer it for them.



# 8 Wound Care

## Bandaging Guidelines

- Use clean, sterile dressings.
- Check circulation below the injury before and after applying a bandage. If circulation is reduced, loosen the bandage.
- If blood soaks through, leave the bandage and apply another on top.



Infection is a risk whenever a person's skin is broken. Monitor any open wound for redness, swelling, or discharge in the days following the injury. Seek medical attention if any signs of infection appear.



## Cuts and Scrapes



### Care

1. If the wound is bleeding significantly, apply direct pressure until it stops.

2. Rinse the wound for 5 minutes with clean, running water.



3. Bandage the wound.







Wounds on a person's head can affect the brain. If you feel a dip or soft area, you should treat the person for a head injury. Apply direct pressure only if there is life-threatening bleeding. Otherwise, try to control the bleeding by putting pressure on the area around the wound.



## Burns

Burns are soft-tissue injuries caused by chemicals, electricity, heat, or radiation. Burns can be:



Superficial



Partial Thickness



Full Thickness



### Call

Call EMS/9-1-1 and get an AED immediately if:

- The burns make it difficult for the person to breathe.
- The burns were caused by chemicals, explosions, or electricity.
- The burns are full thickness or involve a large amount of blistered or broken skin.
- The burns cover the face, neck, hands, genitals, or a larger surface area.



Monitor for hypothermia when cooling large burns, especially on children.



## Care

1. Cool the affected area with water or a clean, cool (but not freezing) compress for at least 10 minutes.



2. Remove jewellery and clothing from the burn site, but do not attempt to move anything that is stuck to the skin.
3. Cover the burn loosely with a dry, sterile dressing.



## Chemical Burns



## Care

1. Put on protective equipment.
2. Remove any clothes that might have the chemical on them, and brush any dry chemical powder off the person's skin.
3. Flush with large amounts of cool running water for at least 15 minutes.



Use caution with dry caustic chemicals, as they may spread or react if they become wet. Refer to the appropriate Safety Data Sheet (SDS) for additional first aid measures.



# Electrical Burns

## Care

Because powerful electrical currents can affect the heart, it is important to monitor the person's ABCs closely.

1. Ensure that the electrical current has been turned off.
2. Keep the person still.
3. Look for and treat two burns (the entry and exit points).



# Bruises

## Call

If the person is in severe pain or cannot move a body part without pain, or you suspect life-threatening internal bleeding, call EMS/ 9-1-1.



## Care

1. Apply a cold pack, wrapped in a towel, for up to 20 minutes of every hour, for as long as it continues to help ease the person's pain (up to 48 hours).





## Splinters

### Care

1. Gently grab the exposed end of the splinter with tweezers and carefully pull it out. Treat the wound as a cut.



## Nosebleeds

### Call

Call EMS/9-1-1 if the bleeding continues for more than 15 minutes.

### Care

1. Have the person sit with the head slightly forward.
2. Pinch the person's nostrils for 10 to 15 minutes.





# Knocked-Out Teeth



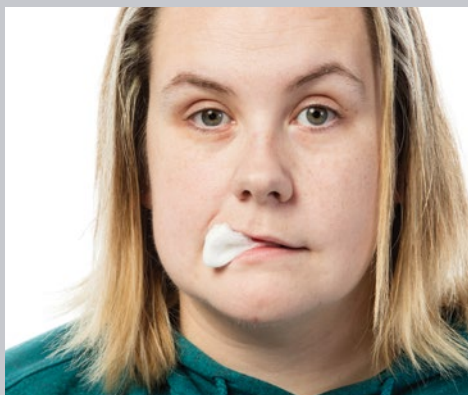
## Call

Call EMS/9-1-1 if the tooth was knocked out by a forceful blow or if you suspect more serious injuries.

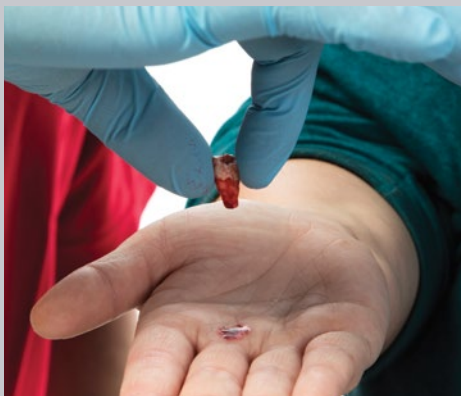


## Care

1. Have the person bite down on a clean dressing.



2. Carefully pick up the tooth by the crown (the whiter part) and keep it protected.
3. Get the person and the tooth to a dentist as soon as possible.



Protect the tooth by putting it in egg white, coconut water, or whole milk, or wrapping the tooth in gauze or a clean cloth with some of the person's saliva.





# Eye Injuries



## Call

Call EMS/9-1-1 if there is an impaled object in or near the eye, the eye is out of the socket, or the eye has been exposed to a chemical.



## Care

Avoid touching the eye or putting pressure on or around it.

If there is something in the eye but it is not impaled:

1. Have the person blink several times.
2. Gently flush the eye with running water.
3. If these steps do not remove the object, the person should seek medical attention.

If there is a chemical in the eye:

1. Gently flush the eye with running water (away from the unaffected eye) for at least 15 minutes or until EMS personnel arrive.

If the eyes were flash burned:

1. Move the person away from the source of UV light.
2. Cover the eyes with a cool, wet cloth.
3. Make sure the person gets medical attention.





# Ear Injuries



## Call

Call EMS/9-1-1 and get an AED if there is blood or other fluid draining from the ear, or if the ear injury is the result of an explosion or pressure (e.g., while scuba diving).



## Care

If the injury is an external wound, treat it the same way you would treat a wound on any other part of the body.

If there is a foreign object in the ear but you don't suspect a head and/or spinal injury, and it looks as if the object can be easily removed:

1. Tilt the head to the affected side, then gently tap the ear to loosen the object.
2. Attempt to grasp the object and pull it out.

# Impaled Objects



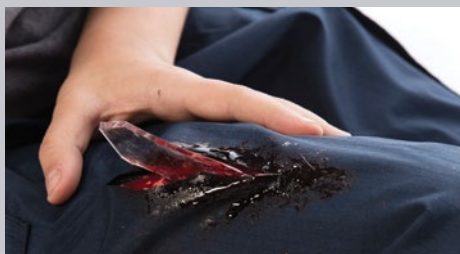
## Call

Call EMS/9-1-1.



## Care

1. Leave the object in place.



2. Stabilize the object without putting direct pressure on it.



3. Secure the dressings in place.







# Chest Injuries

## What to Look For

- Deformity or swelling
- Guarded, shallow breathing
- Bruising
- Coughing up blood

If chest is penetrated:

- Gasping or difficulty breathing
- Bleeding from an open chest wound that may bubble
- A sucking sound coming from the wound with each breath



## Call

Call EMS/9-1-1 and get an AED.



## Care

1. Have the person rest in a comfortable position, keeping the person as still as possible.
2. If the wound is bleeding profusely, apply direct pressure. If bleeding is minor, do not apply pressure or a dressing.
3. If there is no penetrating injury, give the person something bulky (such as a towel) to hold against the chest.



If you must apply a dressing, ensure that it does not become saturated with blood, as saturation will prevent air from escaping and create pressure in the chest. If the dressing becomes saturated it must be changed.



# Abdominal Wounds



## Call

Call EMS/9-1-1 if you suspect life-threatening internal bleeding or if there are organs protruding from the abdomen.



## Care

If organs are not protruding, care for any injuries as you would care for them on any other part of the body.

If there are organs protruding:

1. Do not apply direct pressure or attempt to push organs back into the abdomen.
2. Cover the protruding organs with moist, sterile dressings.
3. Loosely cover the dressings with plastic, if available.
4. Cover the person with a towel or blanket to keep them warm.



# 9

## Head, Neck, Spine, and Pelvis Injuries

You should suspect a head, neck, spine, or pelvis injury in the following situations:

- A fall from any height greater than the height of the person
- A diving injury
- A person found unresponsive for unknown reasons
- A strong blow to the lower jaw, head, or torso
- A person has been struck by lightning or electrocuted



A person who has a suspected head, neck, or spinal injury may also have a pelvic injury. Do not put pressure on the pelvis. Treat as a head, neck, or spinal injury.

### What to Look For

#### Head, Neck, or Spine Injury

- Severe pain or pressure in the head, neck, or back
- Blood or other fluids draining from the ears or nose
- Unusual bumps or depressions
- Bruises, especially around the eyes and behind the ears
- Seizures
- Impaired breathing or vision
- Nausea or vomiting
- Unequal pupil size
- Partial or complete loss of movement of any body part
- Loss of bladder or bowel control
- Changes in level of responsiveness, awareness, and behaviour
- Weakness, tingling, or loss of sensation
- Dizziness and/or loss of balance

#### Pelvis Injury

- Deformity or swelling
- A pool of blood under the skin or bruising
- Pain, difficulty, and/or inability to move or use the body part
- An inability to walk or stand
- A shorter, twisted, or bent leg
- A broken bone sticking out of the skin
- A snapping or popping sound
- A feeling or sound of grating bones
- Muscle cramps
- Numbness or tingling
- Signs of shock



### Call

Call EMS/9-1-1 and get an AED.



1. Have the person keep as still as possible until EMS personnel arrive:
  - For a head, neck, or spinal injury: If the person is unable to support their own head, manually support it in the position found.
  - For a pelvis injury: If you must move the person or EMS response will be delayed, you can keep their legs still by placing padding between their legs and tying them together.

## Concussion

Concussions are a common subset of traumatic brain injuries (TBIs) that can have catastrophic, lifelong consequences. Anyone who has had a concussion must follow the treatment plan recommended by a healthcare provider.



### What to Look For

#### Mental

- Drowsiness
- Clouded or foggy mindset
- Seeming stunned or dazed
- Temporary memory loss
- Slowed reaction times

#### Physical

- Neck pain or headache
- Loss of responsiveness
- Dizziness or loss of balance
- Changes to vision
- Sleeping more or less than usual
- Nausea or vomiting
- Sensitivity to light and/or noise
- Seizure

#### Emotional

- Irritability
- Heightened emotions
- Personality changes

#### In Children and Babies

- Changes in playing, sleeping, or eating habits
- Excessive crying
- Lack of interest in activities or toys



## Call

Call EMS/9-1-1 if the person has any of the following:

- Repeated or projectile vomiting
- Loss of responsiveness of any duration
- Lack of physical coordination
- Confusion, disorientation, or memory loss
- Changes to normal speech
- Seizures
- Vision and ocular changes (e.g., double vision or unequal pupil size)
- Persistent dizziness or loss of balance
- Weakness or tingling in the arms or legs
- Severe or increasing headache



## Care

1. Advise the person to immediately stop all activity and follow up with a qualified healthcare provider as soon as possible.



# 10 Bone, Muscle, and Joint Injuries

There are four basic types of bone, muscle, and joint injuries: strain, sprain, dislocation, and fracture. The first aid for each of these is generally the same.

## Strain

The stretching or tearing of muscles or tendons.



## Sprain

The stretching or tearing of ligaments at a joint.



## Dislocation

The movement of a bone out of its normal position at a joint.



## Fracture

A chip, crack, or break in a bone.



## What to Look For

- Deformity, swelling, or bruising
- Limited or no use of the injured body part
- Bone fragments sticking out of the skin



## Call

You should always call EMS/9-1-1 if:

- There are injuries to the thigh bone or pelvis.
- The area below the injury is numb, pale, blue, or cold.
- A broken bone is protruding through the skin.
- You cannot safely move the person.



## Care

Treat the injury using the RICE method:

**R**est: Have the person rest comfortably.

**I**mmobilize: Keep the injured area as still as possible.

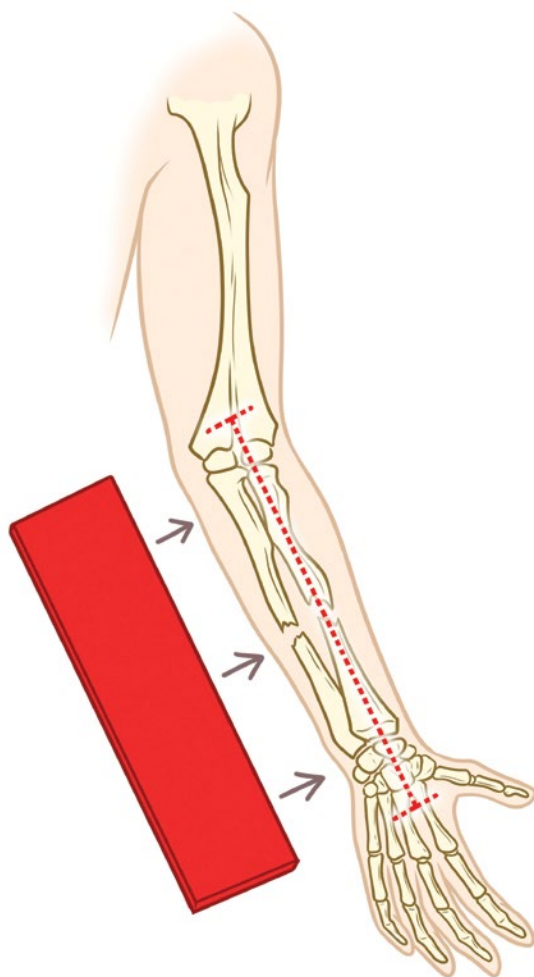
**C**ool: Cool the injured area for 20 minutes of every hour.

**E**levate: Raise the injury, as long as this does not increase the pain.



## Splints and Slings

- Check for normal temperature and skin colour below the injured area before and after immobilizing the limb:
  - If the area is cold before immobilizing, call EMS/9-1-1.
  - If the area is cold after immobilizing, loosen the splint gently.
- Remove jewellery below the site of the injury.
- Immobilize the injured part in the position in which it was found.
- Make sure a splint is long enough to extend above and below the injury.
- Pad slings and splints.



Common items such as rolled newspapers, scarves, belts, and pillows can be used to improvise slings and splints if commercial versions are not available.







## Regular Sling

1. Have the person hold the injured arm across the body.



2. Slide a triangular bandage under the injured arm.
3. Bring the bottom end of the bandage over the shoulder of the injured side and tie the ends together behind the neck.



4. Secure the elbow by twisting, tying, or pinning the corner of the bandage.



5. Secure the arm to the body with a broad bandage.





## Tube Sling

1. Have the person support the arm of the injured side.



2. Place a triangular bandage over the forearm and hand.



3. Tuck the lower edge under the arm and twist the end to secure the elbow.



4. Tie the bandage's ends together.



5. Secure the arm to the body with a broad bandage.





# 11

## Sudden Medical Emergencies

### Diabetic Emergencies

A diabetic emergency happens when blood sugar levels fluctuate outside the normal range.

#### What to Look For

- Changes in the level of responsiveness
- Changes in behaviour, such as confusion or aggression
- Rapid breathing
- Cool skin that is a different colour than usual
- Appearance of intoxication
- Seizures



#### Call

Call EMS/9-1-1 if:

- The person is not fully awake.
- The person has a seizure.
- The person's condition does not improve within 10 minutes of having sugar.



Do not give the person insulin.



#### Care

1. If the person is able to swallow safely, have the person ingest sugar.
2. If the person's condition does not improve within 10 minutes, call EMS/9-1-1 and administer more sugar if it is still safe to do so.



The preferred sugar sources (in order of preference) are oral glucose tablets, chewable candy, fruit juice, fruit strips, and milk. If none of these are available, other forms of sugar can also be effective.

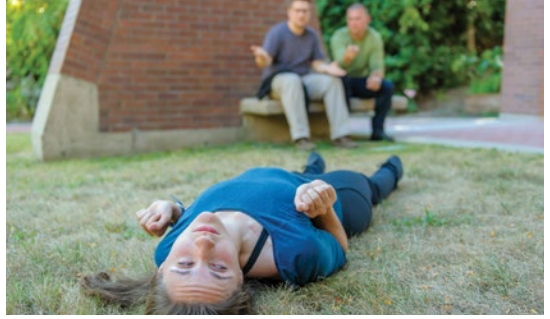


# Seizures

A seizure is an episode of abnormal brain function.

## What to Look For

- Uncontrollable muscle movement
- Drool or foaming at the mouth
- Uncontrolled repetitive motions
- An altered level of responsiveness



## Call

Call EMS/9-1-1 if:

- You do not know the person's medical history.
- The seizure lasts more than a few minutes.
- The person has several seizures in a row.
- The person is unresponsive for an extended period.



## Care

1. Protect the person from injury by:
  - Moving objects that could cause injury.
  - Protecting the person's head with a soft object.
2. Do not try to hold the person down.
3. Roll the person into the recovery position. The person may be drowsy and disoriented for up to 20 minutes.



Babies and young children may have seizures if their body temperatures suddenly rise. These are called “febrile seizures” and are most commonly associated with sudden high fevers. In most cases, these seizures are not life-threatening and do not last long, but you should always call EMS/9-1-1.



# Mental Health Emergency

First aid during a mental health emergency refers to the initial assistance provided by a trained First Aider to someone in crisis. It involves recognizing the signs and symptoms of distress and offering support until professional help arrives or the situation improves.

## What to Look For

- Confusion or difficulty thinking clearly
- Trouble completing everyday tasks
- Hallucinations (such as hearing voices or seeing things that aren't there)
- Withdrawal from others or isolation
- Noticeable mood swings
- Any behaviour that puts the person at risk of harming themselves or others

In a mental health emergency, the most immediate threat to the person is suicide.



Responding to suicide or a suicide attempt can be traumatic. Talk to a professional if you experience lingering feelings of guilt or distress.



## Call

Call EMS/9-1-1 immediately if you suspect that the person poses a risk to themselves or others.



## Care

### 1. Provide reassurance and support by:

- Minimizing distractions as much as possible
- Creating a calm atmosphere
- Recognizing the person's feelings and emotions without judging them
- Using active listening to offer reassurance, comfort, and support
- Connecting them with mental health professionals or community resources



Support for individuals thinking about suicide is available by phone or text message through the Canada-wide **9-8-8 Suicide Crisis Helpline**, 24 hours a day, 7 days a week.



## Self-Care Management

Self-care management means taking steps to manage the stress in your life.

Managing stress is different for everyone, but these tips can help reduce it:

- **Exercise:** Regular exercise is one of the most effective ways to manage stress.
- **Talk to someone you trust:** Reaching out to a friend or family member can be very helpful.
- **Engage in activities you enjoy:** Doing things you love can lift your mood.
- **Practice breathing or grounding exercises:** These techniques can help calm you down.





# 12 Environmental Illness

## Heat-Related Illnesses

### Heat Exhaustion

#### What to Look For

- Moist, warm skin
- Headache
- Weakness or exhaustion
- Nausea or vomiting
- Fainting
- Anxiety
- Dizziness



#### Call

Call EMS/9-1-1 immediately if the person is nauseous, vomiting, dizzy, anxious, or has a change in their level of responsiveness. Otherwise, provide care and monitor the person closely.



#### Care

1. Remove the person from the hot environment.
2. Loosen tight clothing and remove any padding from the person's torso.
3. Actively cool the person, using one or both of these methods (in order of preference):
  - a. Pour water on the person's clothing and/or on towels or cloths and place them on the person's chest, then fan the person.
  - b. Apply ice or cold packs to the person's armpits and chest.
4. If the person is alert, provide a cool drink.







# Heat Stroke

## What to Look For

- Dry, hot skin
- Seizures
- Unresponsiveness
- Severe headache
- Changes in behaviour, such as irritableness, aggressiveness, or bizarre behaviour
- Rapid, shallow breathing



## Call

Call EMS/9-1-1 and get an AED.



## Care

1. Remove the person from the hot environment.
2. Loosen tight clothing and remove any padding from the torso.
3. Aggressively cool the person, using as many as of these methods as possible (in order of preference):
  - a. Immerse the person's forearms in cool water.
  - b. Pour water on the person's clothing and/or on towels or cloths and place them on the person's chest, then fan the person.
  - c. Apply ice or cold packs to the person's armpits and chest.
4. If the person is alert, provide a cool drink.

# Cold-Related Illnesses

## Frostbite

### What to Look For

#### *Superficial Frostbite*

- Hardened skin
- Skin that looks paler than the area around it
- Pain or stinging in the area, followed by numbness

#### *Deep Frostbite*

- Skin and underlying tissues that are hard and solid to the touch
- Skin that is white, blue, black, or mottled
- Complete loss of feeling in the affected area



Different stages of frostbite.  
From left to right: superficial frostbite, deep frostbite.

## Care

1. Remove anything that may restrict blood flow to the affected area.
2. Thaw the area only if you are sure it will not freeze again. Use warm (not hot) water or body heat.



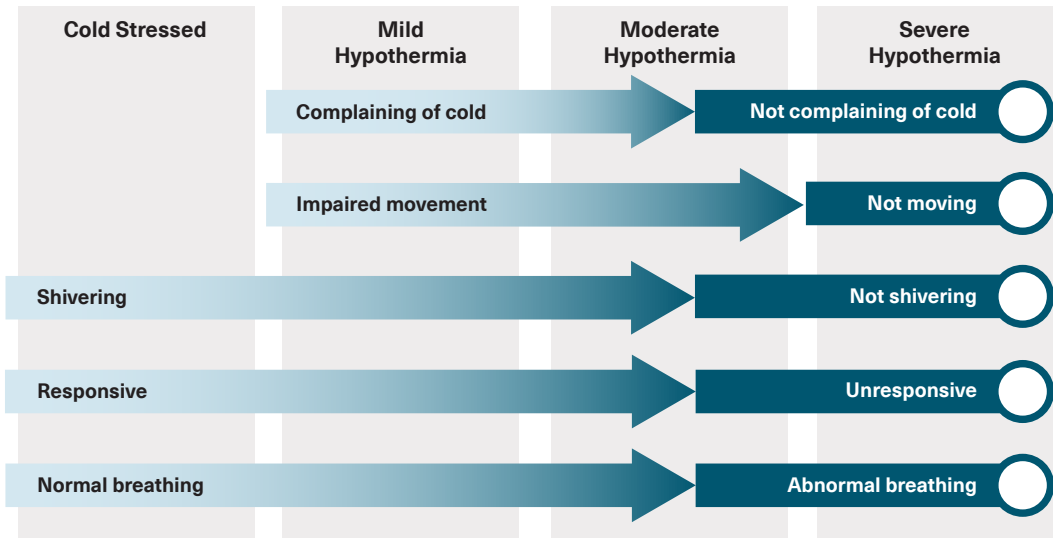
3. Protect skin with loose, dry dressings. Place gauze between the fingers or toes if they are affected. Leave any blisters intact.
4. If possible, elevate any thawed extremities above the level of the heart.
5. Rehydrate the person by providing plenty of fluids.
6. Encourage the person to seek medical attention.





# Hypothermia

## What to Look For



The progression from cold stress (left) through mild, moderate, and severe hypothermia (right)

### Care

1. Assess the person's movement, shivering, responsiveness, and breathing to determine if they are experiencing cold stress or mild, moderate, or severe hypothermia.
2. Provide the care for the person's condition (cold stressed or mild, moderate, or severe hypothermia).

### *Cold Stress (Not Hypothermia)*

1. Reduce heat loss (e.g., add dry clothing).
2. Give the person a high-calorie food or drink.
3. Increase heat production (e.g., have the person exercise).

### *Mild Hypothermia*

1. Handle the person gently and keep them horizontal (no standing or walking for at least 30 minutes).
2. Insulate the person or apply a vapour barrier.
3. Apply heat to the person's upper trunk.
4. Give the person a high-calorie food or drink.
5. Monitor the person until their symptoms improve (for at least 30 minutes).
6. Call EMS/9-1-1 if there is no improvement.



## ***Moderate Hypothermia***

1. Handle the person gently and keep them horizontal (no standing or walking).
2. Do not give the person a drink or food.
3. Insulate the person or apply a vapour barrier.
4. Apply heat to the person's upper trunk.
5. Call EMS/9-1-1.

## ***Severe Hypothermia***

1. If the person has no obvious vital signs, check for breathing for 60 seconds.
  - If the person IS breathing, follow the steps for moderate hypothermia.
  - If the person is NOT breathing, start CPR.
2. Call EMS/9-1-1.

# **Trench Foot (Immersion Foot)**

## **What to Look For**

- Swollen, cold, and waxy feet
- Peeling skin
- Reduced sensitivity to touch
- A wooden feeling in their feet
- Delayed capillary refill time (their nail beds stay white after being squeezed)

After the person's foot warms up, they might have:

- Warm, dry, red skin
- Blisters
- Pain
- Tingling or itching
- Increased sensitivity to cold



## **Call**

If a person's feet have redness, red streaks, blisters, or cracks that do not go away after basic foot care, advise them to contact their care provider.



## **Care**

1. Get the person's foot warm, clean, and dry. Handle the area gently and warm it slowly.
2. Elevate the injured foot or feet.
3. Continue to monitor the person and the affected area.



# 13 Poisons



## Call

If the person has an altered level of responsiveness or has difficulty breathing, call EMS/9-1-1 and get an AED. Otherwise, call 1-844-POISON-X or your local poison centre.



## Care

The specific care depends on the type of poison. Follow these general guidelines, along with any instructions from the poison centre or EMS dispatcher.

Always use PPE when caring for a poisoned person so that you don't come into contact with the poison.



**Swallowed**

### What to Look For

- An open container of poison nearby
- Burns around the mouth
- Increased production of saliva and/or saliva that is an abnormal colour
- Abdominal cramps, vomiting, and/or diarrhea
- A burning sensation in the mouth, throat, or stomach

### Care

1. Check the packaging of the poison.
2. Induce vomiting only if told to do so by the EMS dispatcher or the poison centre.
3. If the person needs to go to the hospital, bring a sample of the poison (or its original container).



**Inhaled**

### What to Look For

- Breathing difficulties
- Irritated eyes, nose, or throat
- Bluish colour around the mouth
- An unusual smell in the air

### Care

1. Move the person into fresh air, but do not enter a hazardous atmosphere yourself to do so.



**Absorbed**

#### What to Look For

- Rash or hives
- Burning or itching skin
- Blisters
- Burns

#### Care

1. If the poison is a dry powder, brush it off the person's skin, being careful to avoid touching it.
2. Remove any clothing covered in the poison.
3. Flush the skin with running water for at least 15 minutes. Make sure the water flushes away from any unaffected areas of the body.



**Injected**

#### What to Look For

- One or more puncture wounds
- Problems breathing
- Redness and swelling at the entry point
- A needle found nearby

#### Care

1. Wash the puncture site with clean running water.
2. Keep the person still.

## Carbon Monoxide Poisoning

Carbon monoxide (CO) is a gas that has no smell, colour, or taste. It is released when fuel is burned (e.g., in a car engine, fireplace, or furnace) without proper ventilation. Concentrated CO is poisonous and life-threatening to those who inhale it.

### What to Look For

Signs and symptoms include the following:

- Headache
- Dizziness or light-headedness
- Confusion or altered level of responsiveness
- Weakness or fatigue
- Muscle cramps
- Nausea and vomiting
- Chest pain

### Care

1. Treat the person for inhaled poisoning.



## Poison Ivy, Sumac, and Oak

Poison ivy, poison sumac, and poison oak produce oil that causes skin irritation in most people.

### What to Look For

- Itchy skin
- Reddening of the skin
- Bumps or blisters

### Care

1. Encourage the person to apply a cream or ointment designed to reduce itching and blistering (e.g., calamine).
2. Suggest that the person take an oral antihistamine to help relieve itching.
3. If the rash is severe or on a sensitive part of the body (such as the face or groin), the person should see a healthcare provider.



Poison Ivy



Poison Sumac



Poison Oak

## Giant Hogweed and Wild Parsnip

### What to Look For

The sap of these plants causes the following signs and symptoms when skin is exposed to sunlight:

- Swelling and reddening of the skin
- Painful blistering
- Purplish scarring

### Call

Call EMS/9-1-1 if the person is having trouble breathing or if the sap is on the eyes, face, or groin.

### Care

1. Protect the area from sunlight.
2. If sap gets into the eyes, rinse them thoroughly with water for at least 15 minutes or until EMS personnel arrive.
3. Encourage the person to seek medical attention.



Giant Hogweed



Wild Parsnip





# Poisoning Caused by Alcohol or Drugs

## What to Look For

The signs and symptoms of alcohol or drug poisoning will vary depending on the drug but often include the following:

- Moist or flushed skin
- Sweating
- Chills or fever
- Nausea or vomiting
- Vomiting blood or passing blood
- Changes in breathing or difficulty breathing
- Racing or pounding heart
- Continuous pain or pressure in the chest or abdomen
- Seizures
- Severe headache
- Slurred speech
- Changes in level of responsiveness
- Changes in behaviour (e.g., aggression or fear)



## Call

Call EMS/9-1-1 and get an AED if you suspect a drug poisoning or if the person is having seizures, has difficulty breathing, is unresponsive, or has a change in behaviour.



## Care

1. Provide care based on the symptoms that the person is experiencing.

## Opioid Poisoning

### What to Look For

The signs and symptoms of an opioid poisoning include:

- Abnormal, slow, or no breathing
- A change in the person's level of responsiveness
- A change in skin colour
- Small or pinpoint pupils
- Seizures
- Clammy skin
- Clues in the environment, such as needles or pill bottles



## Call

Call EMS/9-1-1 and get an AED and a first aid kit any time that you suspect a person is experiencing an opioid poisoning.



## Care

If the person is **UNRESPONSIVE** and their **BREATHING IS ABNORMAL**:

1. Start CPR and administer naloxone.
2. Continue CPR until emergency personnel arrive, or they begin breathing.

If the person is **UNRESPONSIVE** but their **BREATHING IS NORMAL**:

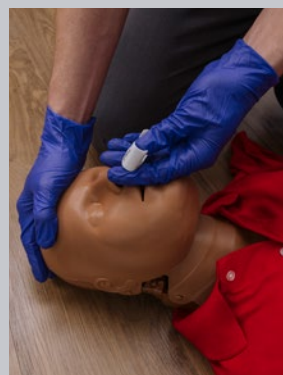
1. Administer naloxone.
2. Monitor the person closely until emergency personnel arrive.
3. Recheck them often since naloxone can cause rapid changes in their condition.



It is recommended that you state clearly to the person that you are preparing to administer naloxone. This gives the person the opportunity to say no if they become responsive.

### ***Administering Naloxone Nasal Spray (Intranasal Device)***

1. Put on gloves.
2. Remove the nasal spray device from the packaging.
  - Do not test the device, as each device only contains one dose.
3. Place your thumb on the plunger and hold the nasal spray tip between your middle and index fingers.
4. Gently tilt the person's head back slightly and support it in this position.
5. Insert the tip of the device into one of the person's nostrils until your fingers touch the bottom of the person's nose.
6. Administer the entire dose of medication by pressing firmly on the plunger.
7. Remove the device from the person's nostril immediately.
8. Give a second dose with a new device if the person's condition does not improve within 2 to 5 minutes.
  - You can give the person a second dose in either of their nostrils.





## ***Administering Intramuscular Naloxone (Injection Into a Muscle)***

- 1.** Put on gloves.
- 2.** Prepare the injection site.
  - The injection will go into the person's upper outer thigh or their outer shoulder.
  - If possible, move clothing from the injection site and clean it with an alcohol swab.
- 3.** Prepare the intramuscular naloxone.
  - If the kit has ampules:
    - a.** Hold the ampule (small glass capsule) upright and gently swirl it or tap the bottom to remove any liquid trapped in the neck.
    - b.** Break the ampule open using the ampule breaker.
  - If the kit has vials:
    - a.** Remove the plastic cap.
    - b.** Clean the rubber stopper with an alcohol pad.
- 4.** Fill the syringe.
  - If the kit has ampules:
    - a.** Remove the cap from the needle.
    - b.** Carefully insert it into the open ampule.
    - c.** Steadily pull up on the plunger to draw all the naloxone from the ampule into the syringe.
  - If the kit has vials:
    - a.** Remove the cap from the needle.
    - b.** Draw some air into the syringe by pulling out the plunger.
    - c.** Stick the needle through the rubber stopper, straight into the vial, and inject into the air.
    - d.** Draw the liquid from the vial.
  - Get rid of any air bubbles.
    - a.** Hold the syringe upright.
    - b.** Tap the barrel of the syringe to move the bubbles to the top.
    - c.** Slowly push the plunger until you can see a small drop of fluid at the tip of the needle.
- 5.** Administer the naloxone.
  - Insert the needle at a 90-degree angle to the skin.
  - Inject all of the naloxone.
  - For a retractable needle, press until you hear a click.
- 6.** After the injection:
  - Remove the needle from the skin.
  - Give a second dose, with a new syringe and needle, if the person's condition does not improve within 2 to 5 minutes.





## Continual Care

1. Give the person more naloxone if it is required.
2. If the person's breathing is normal, roll them into the recovery position while you wait for emergency personnel to arrive.
3. If the person becomes responsive, reassure them that emergency personnel are on the way, and explain what has happened.
4. The person may be agitated when they wake up, so be prepared to move away if needed. They may vomit or be confused.



The Good Samaritan Overdose Act is a federal act that gives some legal protection to anyone who experiences or witnesses an opioid poisoning. It can protect a person from drug possession charges.

## Insect Stings



### Call

Call EMS/9-1-1 and get an AED if there are any signs of a severe allergic reaction.



### Care

1. If the stinger is still imbedded, scrape it away from the skin.



2. Wrap a cold pack in a thin towel and place it on the affected area.
3. Continue to watch for signs of anaphylaxis.





## Animal Bites



### Call

Call your local animal control department if the animal is wild or a stray.



### Care

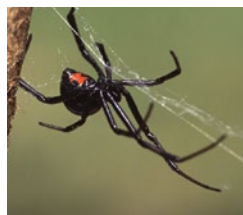
1. Try to get the person safely away from the animal. Do not try to capture it.
2. Treat any wounds.
3. Seek medical attention if the animal is stray or unknown to you or if you suspect it might have rabies.
4. Watch for signs and symptoms of infection.

## Spider Bites

Venomous spider bites in Canada are very rare and typically come from a black widow spider.

### What to Look For

- A raised, round, red mark
- Cramping pain in the thighs, shoulders, back, and abdominal muscles
- Excessive sweating
- Weakness



### Call

Call EMS/9-1-1 if you know or suspect that the person was bitten by a venomous spider.



### Care

To care for a bite from a black widow spider:

1. Have the person rest quietly.
2. Apply a cold pack wrapped in a thin, dry towel.



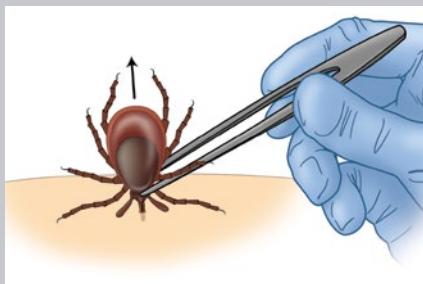
# Tick Bites

## Care

If the tick hasn't started to dig into the flesh, brush it off the skin.

If the tick has begun to bite:

1. Use tweezers to grasp the tick by the head as close to the person's skin as possible.
2. Pull upward without twisting until the tick releases its hold. If you cannot remove the tick or if its mouthparts stay in the skin, the person should seek medical attention.
3. If the tick is removed, wash the area with clean water.
4. If the area becomes infected or the person develops a fever or rash, the person should seek medical attention.

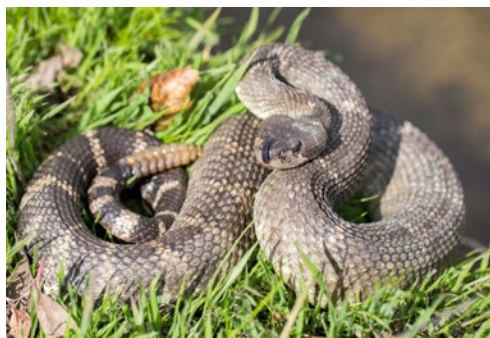


Save any tick you remove in a sealable bag or empty pill bottle, and bring it to the medical appointment. Ticks can be tested for diseases such as Lyme disease and so can help to diagnose your condition.

# Snakebites

## Call

If you know or suspect that the bite was caused by a venomous snake, call EMS/9-1-1.



## Care

1. Ensure that the snake is no longer present. If you see the snake, describe it to EMS personnel when they arrive.
2. Keep the person still, with the bite level with the heart.
3. If the bite is on a limb, remove any jewellery or tight clothing from the limb.
4. Wash the wound with water and cover it with a clean, dry dressing.



# Stings From Marine Life



## What to Look For

- Pain
- Rash and redness
- Swelling
- Puncture wounds or lacerations
- Stingers, tentacles, or pieces of the animal on the person's skin
- Changes in level of responsiveness



## Call

Call EMS/9-1-1 and get an AED if the person is having airway or breathing problems, the person was stung on the face or neck, or you do not know what caused the sting.



## Care

1. Flush the injured area.
  - For most jellyfish: Flush the injured area with vinegar for at least 30 seconds. If vinegar is not available, mix baking soda and water into a paste and leave it on the area for 20 minutes.
  - For Portuguese man o' war (bluebottle jellyfish), stingrays, sea urchins, or spiny fish: Flush the area with ocean water.
2. While wearing gloves or using a towel, carefully remove any pieces of the animal.
3. Immerse the affected area in water as hot as the person can tolerate for at least 20 minutes or until the pain is relieved. Hot or cold packs can also be used.
4. Encourage the person to seek medical attention and to watch for signs of infection.





# 14 Marine Basic First Aid

The Canada Labour Code includes a document called the Maritime Occupational Health and Safety Regulations (MOHS). The MOHS outlines laws about first aid and medical care for people who work in marine environments.



## Call

The normal procedure to obtain radio medical advice is:

1. Make contact with the shore radio station and request medical advice.
2. Give the physician all of the information that you can so that they can make a medical assessment of the situation.
3. The physician will advise you on the immediate care for the person.
4. After the radio call is over, the physician will advise the search and rescue (SAR) authority or the coast guard service (such as a Rescue Coordination Centre [RCC]) on the best method of evacuation.
5. If helicopter evacuation is necessary, the coast guard will keep in touch with the ship.



## Care

Some ill or injured people may need to be transported to a hospital facility quickly, because of severe trauma or a medical emergency. In this case, the person needs medical evacuation from the ship. The vessel's chief officer is responsible for making decisions about medical evacuations.

## Cold-Water Immersion

### What to Do (Rescue)

To self-rescue:

- If you are in open water, do a self-rescue by getting into a boat, raft, or other mode of marine transportation, if available.
- If you have fallen through the ice:
  1. Place your arms on the surface of the ice.
  2. Kick your legs until your body is horizontal to the water's surface.
  3. Kick and pull forward until you are on the ice.
  4. Roll away from the hole before standing up.



To help rescue a person from cold water:

1. **Talk:** Instruct the person on self-rescue.
2. **Throw:** Throw a rope or buoyant object to the person.
3. **Reach:** Reach out to the person with a rigid object like a ladder, paddle, or tree branch.

## Care

Any person rescued from cold water should be treated for hypothermia. If the person is unresponsive and not breathing, begin CPR.



Unless you have received specific training in water rescue, never enter the water or approach a hole in the ice to attempt to help a person.

## Seasickness

### What to Look For

Signs and symptoms of seasickness vary, but include:

- Loss of appetite, nausea, vomiting, or abdominal cramps
- Headaches, dizziness, or exhaustion
- Cold sweat
- Dry mouth
- Change in skin colour

## Call

It is not usually necessary to contact a care provider if a person is seasick, but if the person's seasickness is so severe that they cannot eat or drink and they become dehydrated, they may need to be evacuated to a care facility.

## Care

- In mild cases, the condition will gradually wear off (often during sleep) and no specific treatment is necessary.
- Providing small portions of dry food (such as crackers) can help settle the person's stomach.
- Sucking on ice chips instead of drinking water will reduce the risk of vomiting while still preventing dehydration.
- More severe cases of prolonged vomiting may be managed with over-the-counter preventive medications.

# Foundations of First Aid

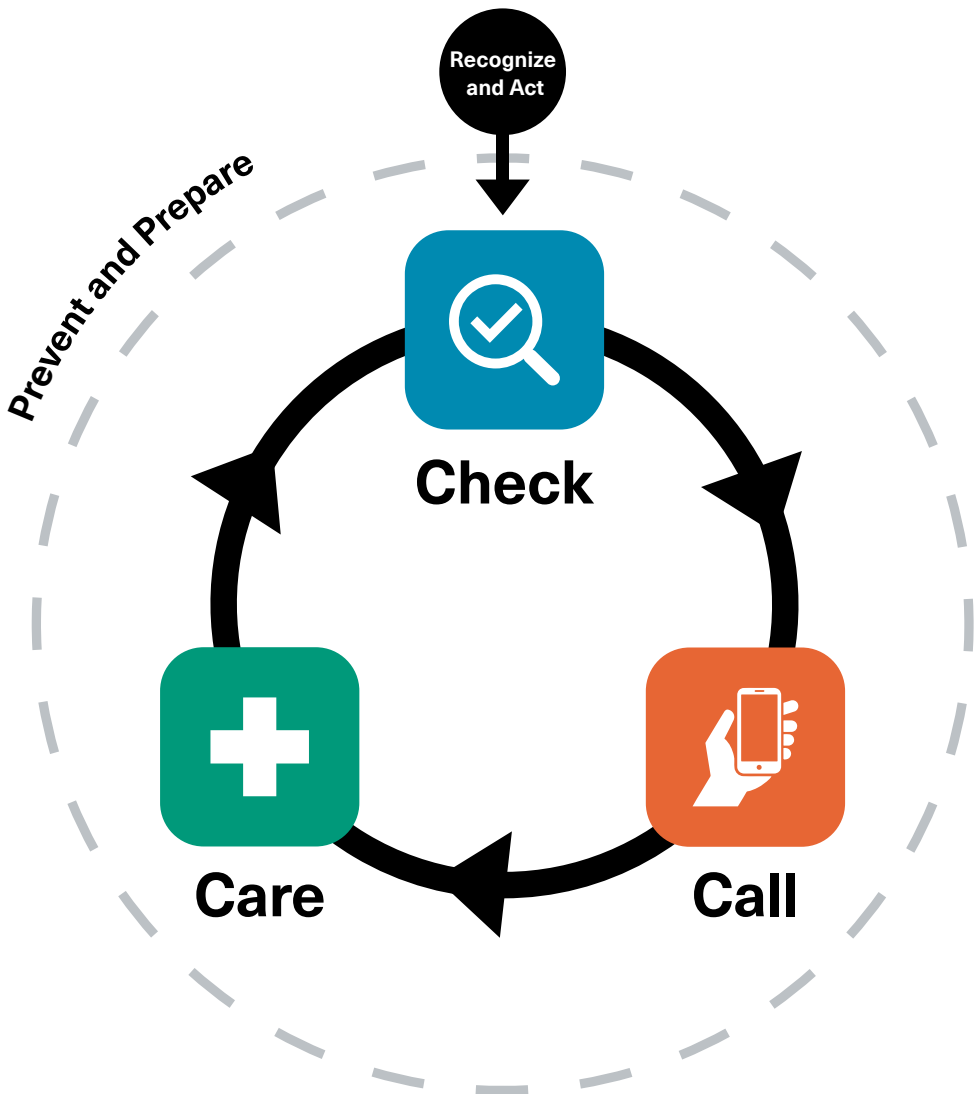
**Protect yourself:** Your safety always comes first.

**Act:** Do the best you can. Doing something is always better than doing nothing.

**Remember the three basic steps:** Check, Call, Care.

**Activate EMS/9-1-1:** When in doubt, call for help.

**Prioritize:** Care for the most serious condition first.





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