



# CPR



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# CPR

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# 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

### DISASTER MANAGEMENT



### INTERNATIONAL OPERATIONS



### FIRST AID PROGRAMS



### SWIMMING & WATER SAFETY PROGRAM



### RESPECT EDUCATION



### COMMUNITY HEALTH AND WELLNESS



# 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 four 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.



## 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.

## 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.

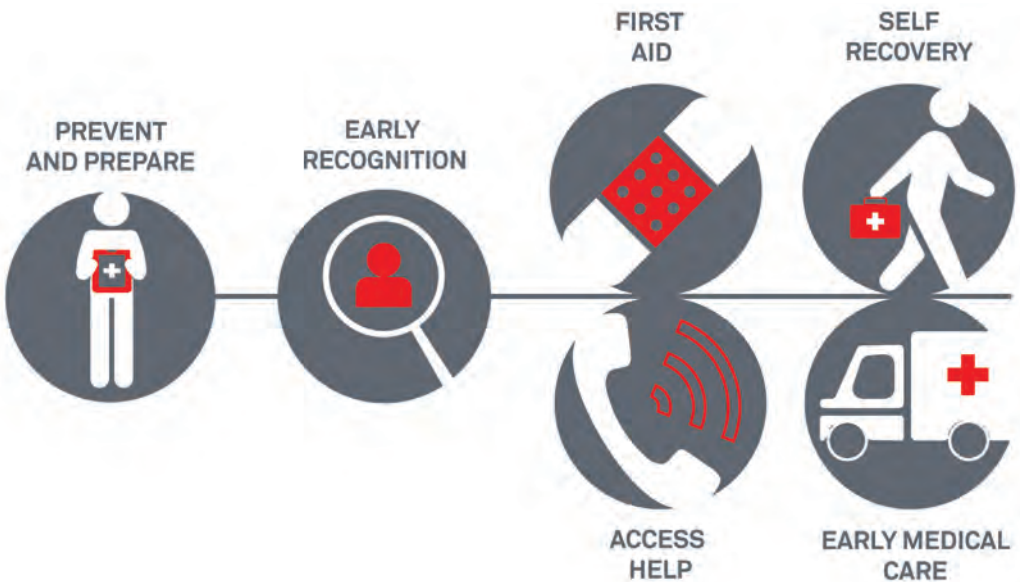


## Duty to Report Child Abuse or Neglect

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.

## Chain of Survival Behaviours

The Chain of Survival Behaviours is a series of actions that, if integrated together, will help ensure a positive outcome for an ill or injured person.



## 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 not easily accessible.
- 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 possible head, neck, or spinal injury.
- Has an apparent mental health crisis.



## 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. 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.

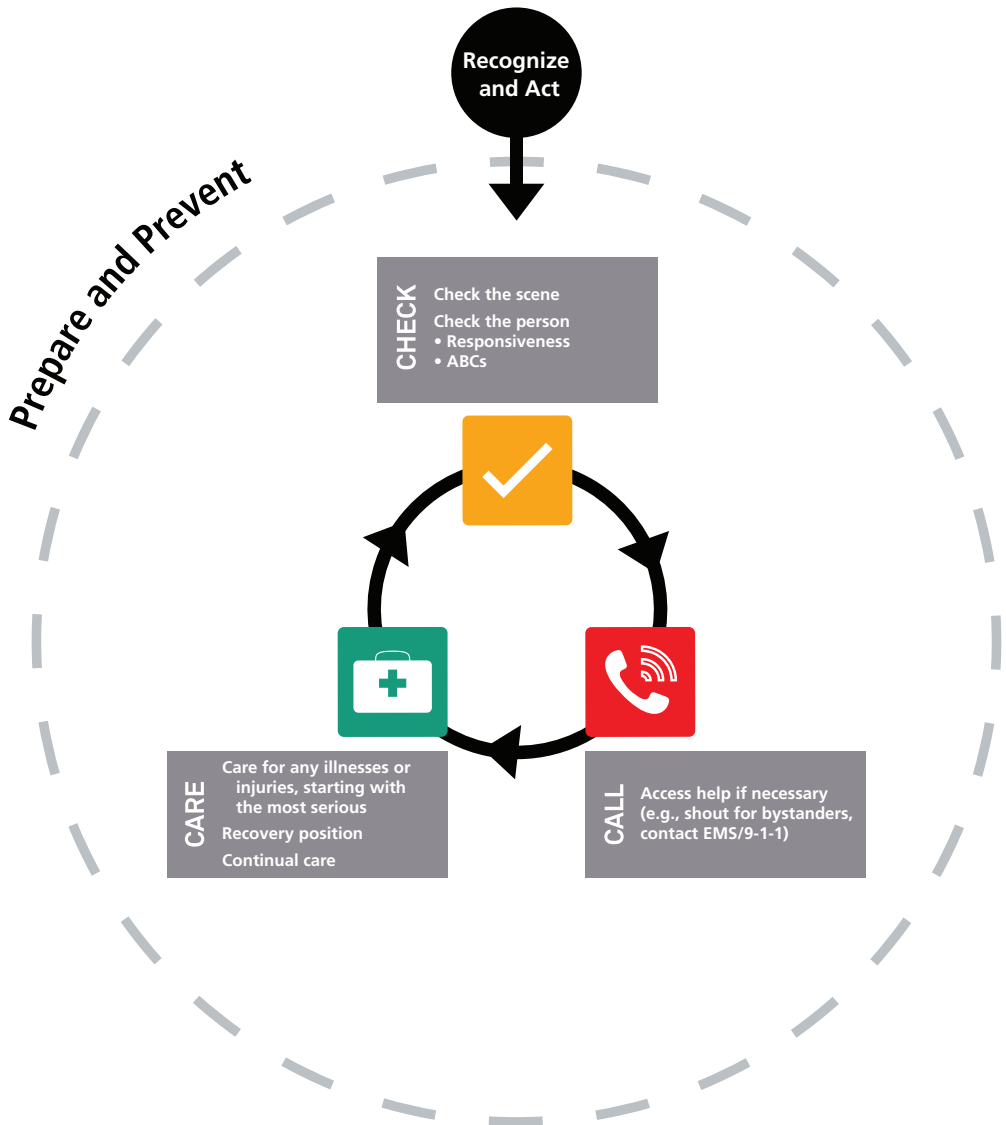


Clean under your fingernails by rubbing them against the palms of your hands. Be sure also to scrub your palms and wrists, the skin between your fingers, and the backs of your hands.

# 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.





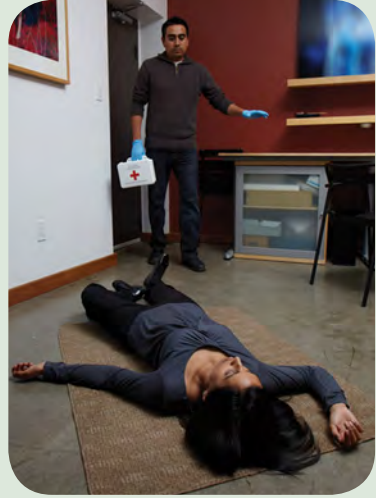
## Check

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?



### **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

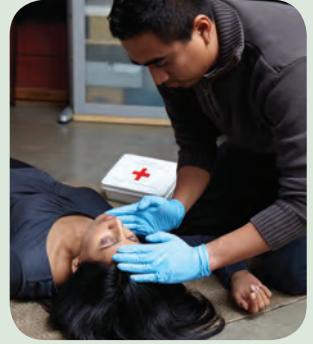


## Checking ABCs

### 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 he or she is 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.

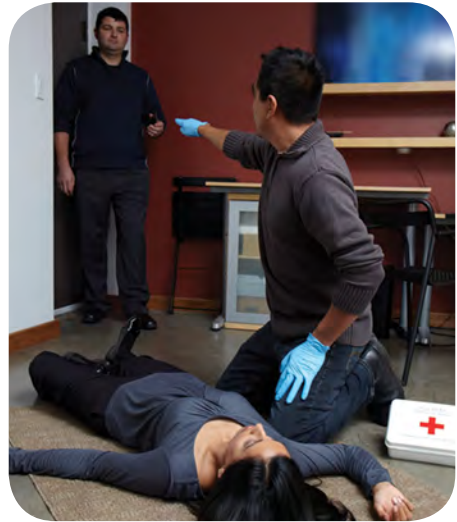


## Call

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 or his or her vital signs deteriorate, 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 his or her medication only if:

- It is safe to do so.
- The person is responsive and has in some way expressed a need for help finding, preparing, and/or taking 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 LIFESAVING MEDICATION

Rescue inhalers and epinephrine auto-injectors are lifesaving medications. If the person cannot give him- or herself lifesaving medication, prepare it, obtain permission, and either press the inhaler's plunger or inject the epinephrine for the person.

# 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 paler than normal
- 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, his or her 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, flip 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
- Cool, pale, sweaty skin
- Dizziness
- Unresponsiveness


### 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



## FAST

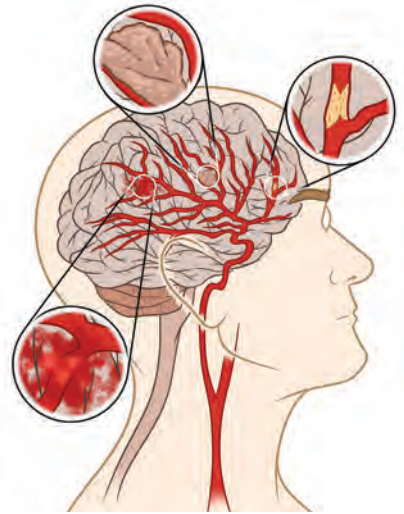
When trying to determine if a person is having a stroke, remember the acronym FAST:

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

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

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

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



## 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.



Use clean, sterile dressings. Check circulation below the injury before and after applying the bandage. If circulation is reduced, loosen the bandage.

# 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 2 hands in the centre of the person'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 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, just below the nipple line.
- 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

ADULT



At least 5 cm (2 in.)

CHILD



At least  $\frac{1}{3}$  of the chest's depth

BABY

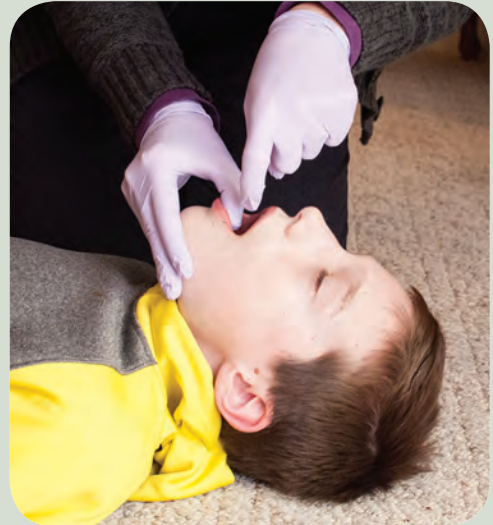


At least  $\frac{1}{3}$  of the chest's depth

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, jewellery, 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.

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