

تجمع الرياض الصحي الثاني
Riyadh Second Health Cluster
شركة الصحة القابضة



FIRST AID QUICK REFERENCE GUIDE

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Life Ambassador



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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَقُلِ اعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ





الدكتور فهد بن صالح الففيلي
الرئيس التنفيذي
تجمع الرياض الصحي الثاني



الدكتور أسامة صالح الشايح
نائب الرئيس التنفيذي للشؤون الأكاديمية و التدريب
تجمع الرياض الصحي الثاني

Foreword from the Executive Vice President for Academic and Training Affairs



Dr. Osama S. Al Shaya

*Executive Vice President of
Academic and Training Affairs*

At the Riyadh Second Health Cluster, our mission is anchored in clinical excellence, meticulous precision, and an unyielding commitment to the preservation of human life. As we actively advance toward our strategic milestone of qualifying 60,000 Life Ambassadors across the community, we recognize that true healthcare equity extends far beyond our clinical facilities and directly into the hands of our citizens.

This reference guide is designed as an operational blueprint for standardized emergency response. By mastering the core competencies outlined within these chapters, you do not merely learn to react to a crisis—you step into a critical leadership role. The methodologies detailed here embody the core philosophies of systems thinking and root-cause analysis that govern our organization, ensuring that every second is systematically optimized to protect our families, colleagues, and neighbors.

I invite each of you to approach this curriculum with the gravity, dedication, and professional rigor it demands. You represent the vital first link in our regional chain of survival. Together, through standardized, evidence-based care and collective readiness, we are engineering a safer, more resilient future for the Kingdom.



From Bystander to Life Ambassador: Your Call to Action



Dr. Reem M. Al Dhalaan
*Director of Academic Operations
Administration*

As you start reading this guide, remember that the transition from a regular bystander to a life ambassador isn't measured by a certificate or a title—it is defined by the willingness to step forward when seconds count.

In moments of crisis, fear and hesitation are entirely natural. However, the basic first aid principles outlined by the **Academic Operations Administration** are designed to cut through that panic, giving you a clear, structured roadmap to protect and preserve human life. By equipping yourself with these skills, you are no longer just a witness to an emergency; you are the vital first link in the chain of survival right here in our community.

The **Riyadh Second Health Cluster** thrives when its citizens look out for one another. Carry this knowledge not just as a set of rules, but as a daily commitment to the safety of your family, your neighbors, and your city. When an emergency strikes, you have the power to change the outcome.

Be ready, stay calm, and step forward—because every life is worth saving, and you are now prepared to save them.



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Chapter 1: Responding to Emergencies

Getting Permission to Help

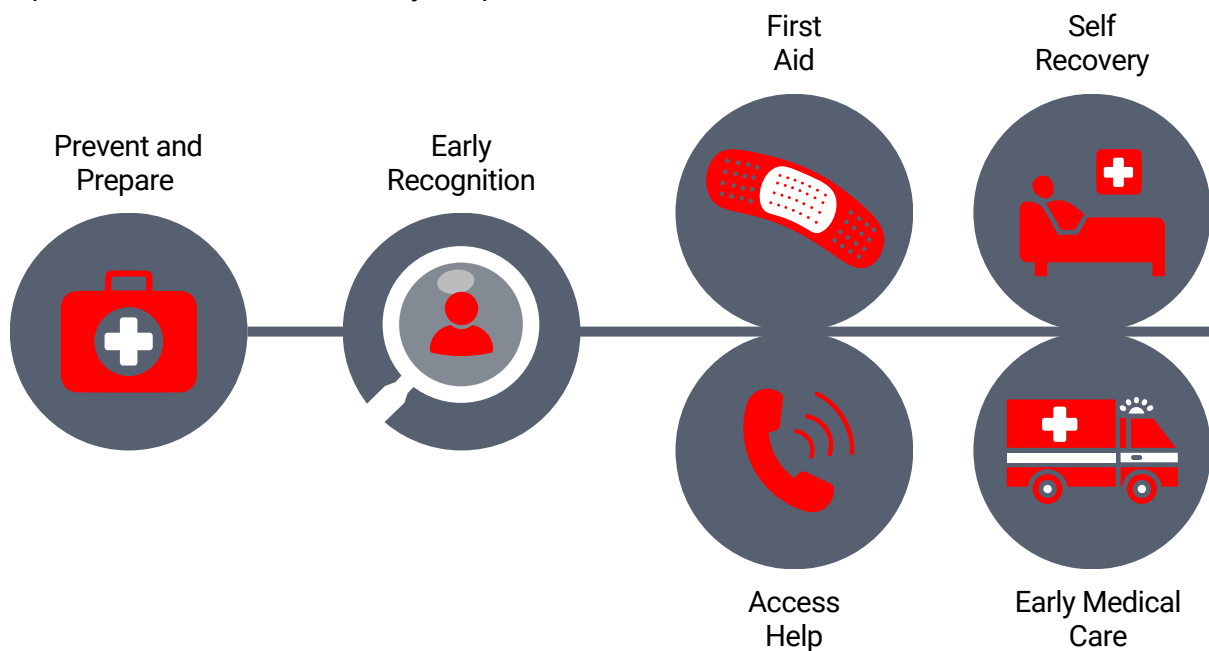
You must get permission (consent) before giving care.

- 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/9-9-7.



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.



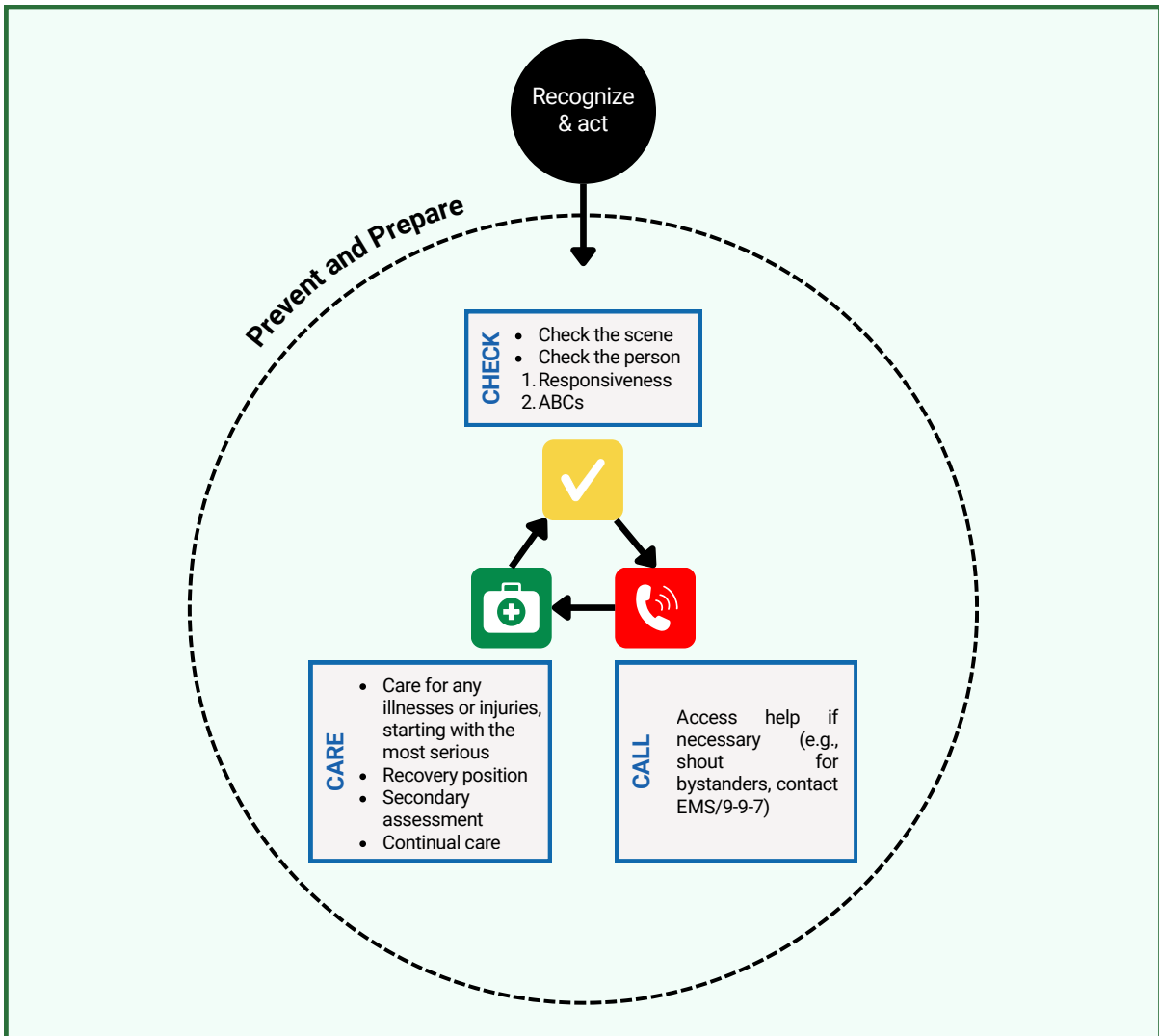
Your Role as a First Aider

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.



Chapter 2: 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?



Chapter 2: Check, Call, Care

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/chinlift by gently tilting the head back until the chin is pointing up.



B = Check the 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 the 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.

Chapter 2: Check, Call, Care

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/9-9-7.

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/9-9-7. As soon as you hang up, return to the person.

If a person becomes unresponsive, his or her vital signs deteriorate, or your secondary assessment reveals a condition that requires emergency care, call EMS/9-9-7 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.

Chapter 2: Check, Call, Care

A. 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.

B. Preparing the Medication

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

C. 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.

D. Giving Lifesaving Medication

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

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:

A. Ask Sample Questions

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

- Signs and symptoms
- Allergies
- Medications
- Past medical history
- Last oral intake (food or drink)
- Events leading up to the emergency



B. 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?

Chapter 2: Check, Call, Care

Skin

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

C. 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/9-9-7, provide care).

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



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



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.



Chapter 2: Check, Call, Care

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/9-9-7.



Care

People in shock need medical care. Call EMS/9-9-7 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.

Chapter 3: Airway Obstruction Emergencies

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

Call EMS/9-9-7.



Care

A. Alternate between any two of the following methods based on the level of obstruction (full or partial) until the object comes out: back blows, abdominal thrusts, and chest thrusts.



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

Back Blows

1. In case of partial obstruction 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. In case of full obstruction 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.



Chapter 3: Airway Obstruction Emergencies

If You are By Yourself and Choking

1. Dial EMS/9-9-7 and move to a place where you can be noticed.
2. Attempt to dislodge the object by performing abdominal thrusts against a safe object.



Infant



Call

Immediately begin providing care for choking. Call EMS/9-9-7 as soon as you or a bystander is able to do so.



Care

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



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



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



Chapter 4: 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/9-9-7 and get an AED immediately.



Care

- Have the person rest quietly.
- 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



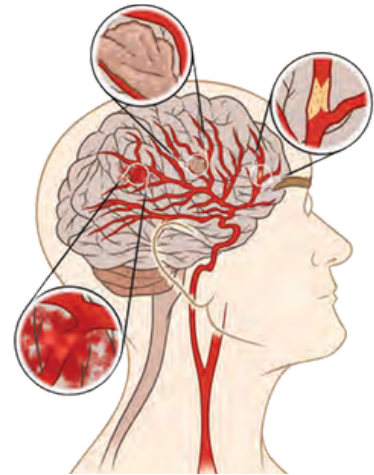
Chapter 4: Circulation Emergencies

- 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/9-9-7 immediately



Call

Call EMS/9-9-7 and get an AED immediately.

Care

- Have the person rest in a comfortable position.
- 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/9-9-7.

Care

- Apply firm, direct pressure to the wound.



Chapter 4: Circulation Emergencies

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



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



- 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.



- Apply the tourniquet: It should be one hand's width above the injury and at least two fingers' width above any joint.



- Tighten the tourniquet until the bleeding stops.



Chapter 4: Circulation Emergencies

- Secure the tourniquet in place.



- 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

- 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

Immediately apply direct pressure and then call EMS/9-9-7.



Care

- 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.

Chapter 5: Cardiopulmonary Resuscitation (CPR) and AED

Cardiopulmonary Resuscitation (CPR)

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



Call

Have a person call EMS/9-9-7 and get an AED immediately.



Adult

If you are alone, call EMS/9-9-7 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/9-9-7 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.



Care

Adult or Child

- Do 30 chest compressions:
 1. Put 2 hands in the centre of the person's chest.
 2. Push deeply and steadily, allowing the chest to recoil between compressions.



Chapter 5: Cardiopulmonary Resuscitation (CPR) and AED

- Give 2 breaths:
 1. Open the airway.
 2. Place your barrier device over the person's mouth and nose, and if using a flat plastic shield, pinch the person's nostrils.
 3. Give just enough air to make the chest start to rise.



- 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)

- Do 30 chest compressions:
 1. Put 2 fingers in the center of the baby's chest, just below the nipple line or two thumb encircling technique.
 2. Push deeply and steadily, allowing the chest to recoil between compressions.



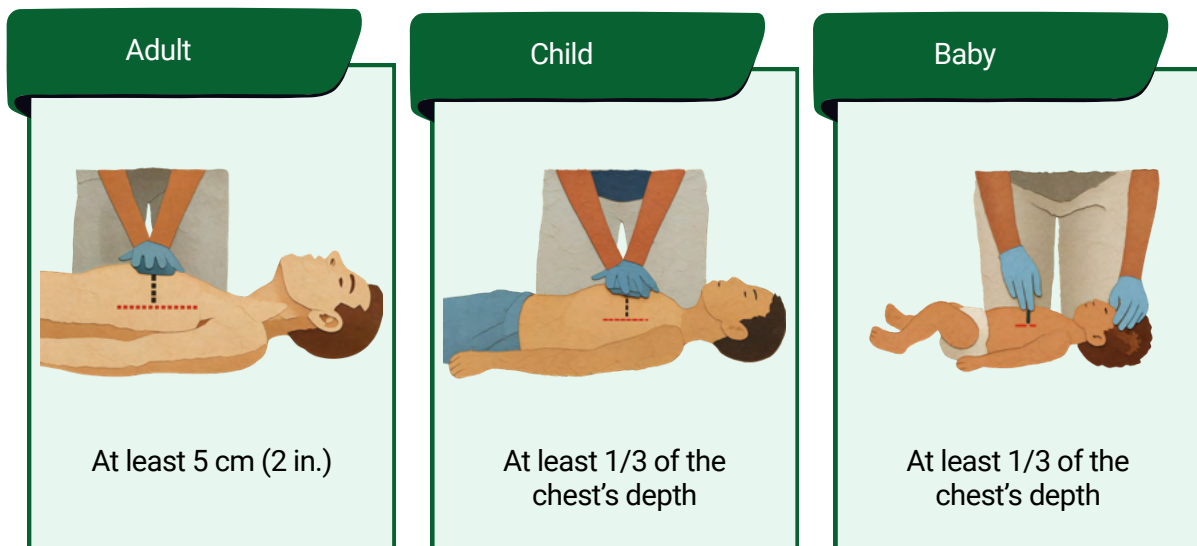
Chapter 5: Cardiopulmonary Resuscitation (CPR) and AED

- Give 2 breaths:
 1. Open the airway.
 2. Place your barrier device over the baby's mouth and nose.
 3. Give just enough air to make the chest start to rise.



- 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.

Chapter 5: Cardiopulmonary Resuscitation (CPR) and AED

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



If the chest does not rise after the first breath, try repositioning the head. If that doesn't work, look in the person's mouth for an object. Continue to look into the person's mouth after each set of compressions until the airway is clear. Once the rescue breaths go in, continue CPR normally.

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

- 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.

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



Chapter 5: Cardiopulmonary Resuscitation (CPR) and AED

- Follow the AED's automated prompts.
- If the AED prompts you to do so, ensure that no one is touching the person and deliver a shock.



- 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.

AED Pad Placement

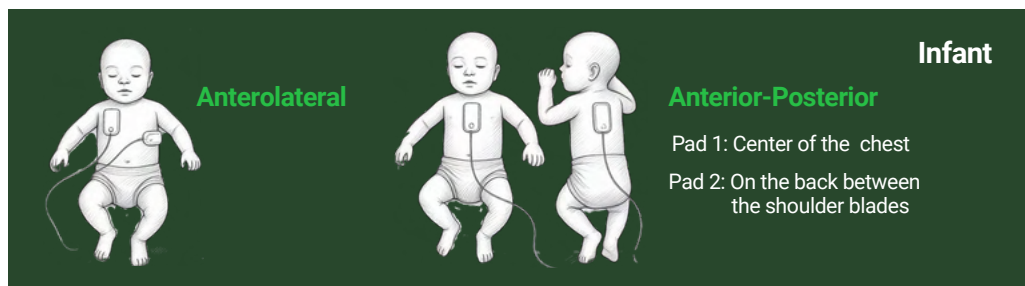
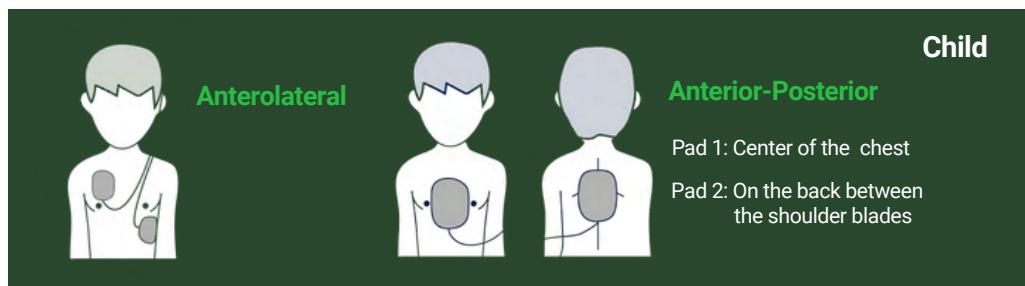
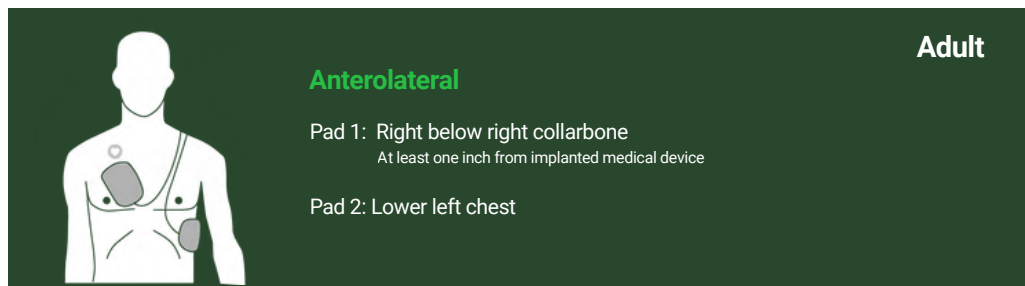
The critical rule for AED pad placement across all age groups is ensuring the pads never touch or overlap each other, allowing the electrical current to travel directly through the heart muscle. Here is the quick-reference summary for pad configuration based on the patient's age and size:

| Patient Group | Age / Weight Criteria | Primary Placement Strategy | Pad Selection |
|---------------|---|--|--|
| Adults | 8 years and older (or greater than 25 kg) | Anterolateral (Front & Side): <ul style="list-style-type: none"> • 1st pad: Upper right chest (just below the collarbone). • 2nd pad: Lower left chest (side of the nipple, mid-axillary line). | Adult Pads |
| Children | 1 to 8 years old (or less than 25 kg) | Anterolateral or Anterior-Posterior: <ul style="list-style-type: none"> • Use Anterolateral if pads do not touch. • Switch to Anterior-Posterior if the child's chest is too small. | Child/Pediatric Pads (If unavailable, use adult pads in Anterior-Posterior position) |

Chapter 5: Cardiopulmonary Resuscitation (CPR) and AED

| Patient Group | Age / Weight Criteria | Primary Placement Strategy | Pad Selection |
|---------------|-----------------------|---|---|
| Infants | Under 1 year old | Anterior-Posterior (Front & Back): <ul style="list-style-type: none"> 1st pad: Center of the chest (sternum). 2nd pad: Center of the back (between the shoulder blades). | Infant/Pediatric Pads (If unavailable, use adult pads in Anterior-Posterior position) |

Critical Safety Note on Pad Substitution: If a child or infant requires defibrillation and pediatric pads (or a pediatric attenuator switch) are missing, adult pads must be used. In this scenario, always apply them in the Anterior-Posterior (Front and Back) configuration to guarantee they do not touch. Conversely, never use pediatric pads on an adult, as the energy dose delivered is insufficient.



Chapter 6: 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/9-9-7 and get an AED if the person is struggling to breathe or does not improve after taking his or her medication.



Care

- If you think that something in the environment is triggering the attack, move the person away from the trigger.

- Help the person to take his or her quick-relief asthma medication.



Using an Inhaler

- Shake the inhaler and remove the cap.



- Breathe out, and then close your mouth around the mouthpiece.
- Press the top of the inhaler while taking one slow, full breath.
- Hold the breath for as long as is comfortable.



Using an Inhaler With a Spacer

- Shake the inhaler and remove the cap.



- Put the inhaler into the spacer.
- Bring the spacer to your mouth and press the top of the inhaler.
- Take slow, deep breaths, holding each breath for several seconds.



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



Call

Call EMS/9-9-7 and get an AED immediately.



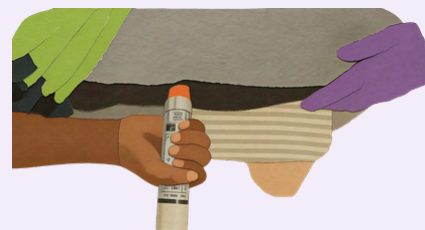
Care

If the person has an epinephrine auto-injector, help him or her to use it:

- Remove the safety cap.



- 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.



6

Chapter 6: Breathing Emergencies

- Rub the injection site for 30 seconds.
- If the person's condition does not improve within 5 minutes, repeat the dose.
- Have the person rest quietly until EMS personnel arrive.



Chapter 7: 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

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

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



- Apply an antibiotic ointment or cream and bandage the wound.



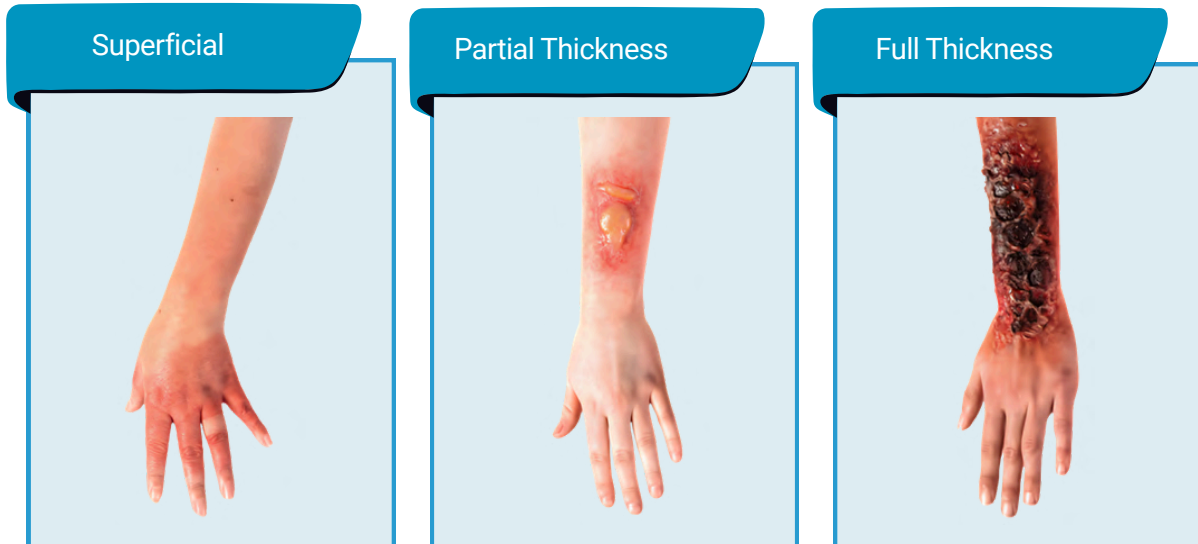
Wounds on a person's head can affect the brain. If you feel a dip or soft area, you should treat the person for a head injury. Apply direct pressure only if there is life-threatening bleeding. Otherwise, try to control the bleeding by putting pressure on the area around the wound.



Chapter 7: Wound Care

Burns

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



Call

Call EMS/9-9-7 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

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



Chapter 7: Wound Care

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



Chemical Burns

Care

- Put on protective equipment.
- Remove any clothes that might have the chemical on them and brush any dry chemical powder off the person's skin.
- 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 Material Safety Data Sheet (MSDS) 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.

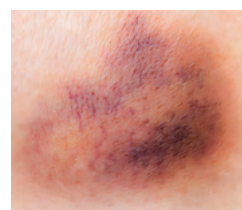
- Ensure that the electrical current has been turned off.
- Keep the person still.
- Look for and treat two burns (the entry and exit points).



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/9-9-7.



Chapter 7: Wound Care



Care

- Apply a cold pack, wrapped in a towel, for up to 20 minutes, and then remove it for 20 to 30 minutes. Repeat until the pain is reduced.



Splinters



Care

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



Nosebleeds



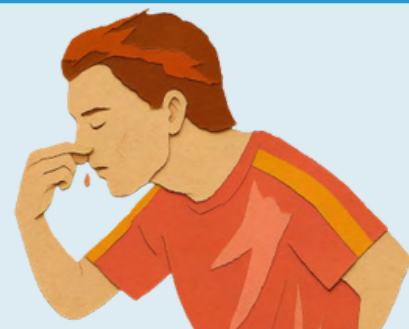
Call

Call EMS/9-9-7 if the bleeding continues for more than 15 minutes.



Care

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



Chapter 7: Wound Care

Knocked Out Tooth

Call

Call EMS/9-9-7 if the tooth was knocked out by a forceful blow or if you suspect more serious injuries.

Care

- Have the person bite down on a clean dressing.



- Carefully pick up the tooth by the crown (the whiter part) and keep it protected.
- 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 Injury

Call

Call EMS/9-9-7 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.



Chapter 7: Wound Care

+ 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. Cover the eyes with a cool, wet cloth.
 2. Make sure the person gets medical attention.



Impaled Objects

+ Call

Call EMS/9-9-7.

+ Care

- Leave the object in place.



- Stabilize the object without putting direct pressure on it.



Chapter 7: Wound Care

1. 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:

- Gaspings 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/9-9-7 and get an AED.



Care

- Have the person rest in a comfortable position, keeping the person as still as possible.
- If the wound is bleeding profusely, apply direct pressure. If bleeding is minor, do not apply pressure or a dressing.
- 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.

Chapter 8: Head, Neck and Spinal Injuries

You should suspect a head, neck, and/or spinal 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 and treat as a head, neck, or spinal injury.

What to Look For

Physical

- 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 and vomiting
- Unequal pupil size
- Partial or complete loss of movement of any body part
- Loss of bladder or bowel control

Mental

- Changes in level of responsiveness, awareness, and behavior
- Weakness, tingling, or loss of sensation
- Dizziness and/or loss of balance



Call

Call EMS/9-9-7 and get an AED.



Care



Have the person keep as still as possible until EMS personnel arrive:

- If the person is unresponsive or unable to support his or her own head, 43 manually support it in the position found.

Concussion

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

Chapter 8: Head, Neck and Spinal Injuries

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 & Babies

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



Call

Call EMS/9-9-7 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

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



Chapter 9: 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.



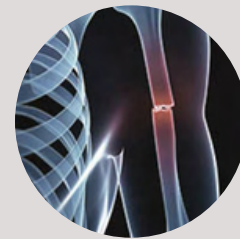
Dislocation

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



Fracture

The stretching or tearing of ligaments at a joint.



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

Call EMS/9-9-7 if the person has any of the following:

- 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.



Chapter 9: Bone, Muscle and Joint Injuries

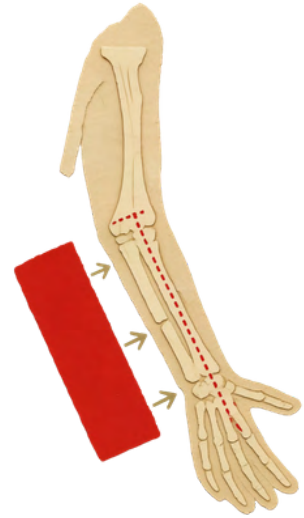
Care

Treat the injury using the RICE method:

- **Rest:** Have the person rest comfortably.
- **Immobilize:** Keep the injured area as still as possible.
- **Cool:** Cool the injured area for 20 minutes of every hour.
- **Elevate:** Raise the injury, as long as this does not increase the pain.

Splints and Slings

- Check for normal temperature and skin color below the injured area before and after immobilizing the limb:
 1. If the area is cold before immobilizing, call EMS/9-9-7.
 2. If the area is cold after immobilizing, loosen the splint gently.
- Remove jewelry 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

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



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



Chapter 9: Bone, Muscle and Joint Injuries

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



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



Tube Sling

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



- Place a triangular bandage over the forearm and hand.



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



- Tie the bandage's ends together.



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



Chapter 10: 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, pale, sweaty skin
- Appearance of intoxication
- Seizures



Call

Call EMS/9-9-7 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

- If the person is able to swallow safely, have the person ingest sugar.
- If the person's condition does not improve within 10 minutes, call EMS/9-9-7 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



Chapter 10: Sudden Medical Emergencies

Call

Call EMS/9-9-7 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

- Protect the person from injury by:
 1. Moving objects that could cause injury.
 2. Protecting the person's head with a soft object.
- Do not try to hold the person down.
- 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/9-9-7.

Mental Health Crisis

Mental health first aid is the first aid given to a person in a mental health crisis. Like all first aid, it involves recognizing the emergency, calling for help if necessary, and providing care until trained personnel take over or the crisis is resolved.

What to Look For

- Inability to think clearly, concentrate, or focus on a task
- Hallucinations or delusions (e.g., hearing voices)
- Depression or sudden mood swings
- Obvious lack of motivation



In a mental health crisis, 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.



Chapter 10: Sudden Medical Emergencies

Call

If possible, contact support systems for the person. If you suspect that the person could hurt someone (including him- or herself), or if the person has attempted suicide, call EMS/9-9-7 immediately.

Care

- Provide reassurance and support:
 1. Reduce distractions and encourage the person to sit down.
 2. Keep the person as calm as possible.
 3. Listen empathetically.
 4. Acknowledge the person's feelings and emotions without judgment.
 5. If the person is delusional, do not dismiss his or her beliefs. Accept that they are real to him or her.
 6. Speak quietly and firmly.
- Offer self-help strategies such as breathing exercises.



Suicide

Potential signs of suicide include a person:

- Expressing negative (especially suicidal) thoughts and comments about him or herself.
- Expressing an intent to die, especially if he or she has a plan.
- Expressing final wishes to someone close by.



Childbirth

Childbirth is a natural process, and the woman's body knows what to do. Your primary role will be to provide comfort and reassurance while you wait for EMS personnel to arrive.

What to Look For

- Contractions are 2 minutes apart or less.
- The woman says that the baby is coming.
- The woman feels the urge to push.
- The woman feels as though she needs to have a bowel movement.
- The baby is crowning.



Call

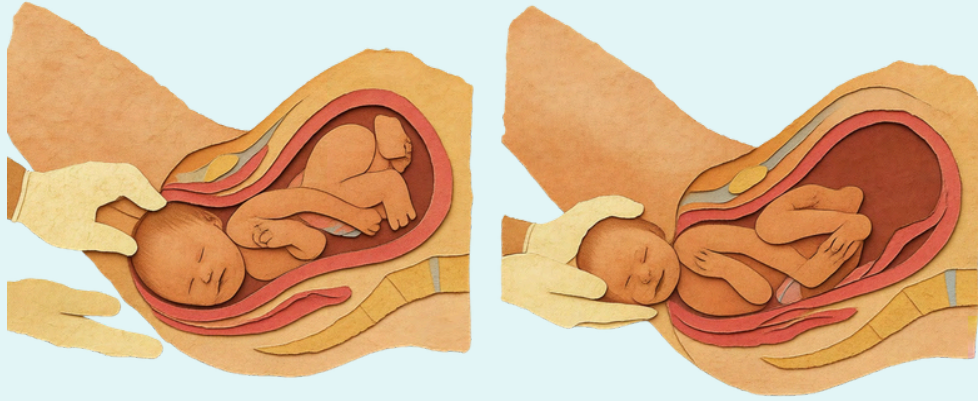
Have someone call EMS/9-9-7.

Chapter 10: Sudden Medical Emergencies



Care

- Create a birthing area by placing clean blankets and/or towels under the mother.
- As the baby is being birthed, support the head.



- Wipe any fluids or mucus away from the baby's mouth and nose.
- Actively dry the baby with a clean cloth to stimulate crying and breathing.
- Place the baby directly onto the mother's chest and cover with a blanket or towel.
- Let the placenta and cord drop onto a clean towel. Do not clamp, tie, or cut the cord.
- Record the time of birth.
- If the mother has any bleeding tears, apply gentle pressure to them.



Chapter 11: Environmental Illness

Heat Related Illness

What to Look For

| Feature | Heat Exhaustion | Heat Stroke |
|-----------|--|--|
| Skin | Moist, Warm | Dry, Hot |
| Physical | Headache, Weakness Exhaustion, Nause, Vomiting, Fainting | Seizures, Coma, Severe Headache |
| Mental | Anxiety, Dizziness | Altered Behavior, Irritable, Aggressive, Bizarre |
| Breathing | Normal | Rapid, Shallow |









Call









The signs and symptoms listed in **red** in the table above are the most serious. Call EMS/9-9-7 immediately if any of these are present. Otherwise, provide care and monitor the person closely.



Care

| Heat Exhaustion | Heat Stroke |
|--|--|
|  Remove from heat |  Remove from heat |
|  Loosen tight clothing, remove padding from torso |  Loosen tight clothing, remove padding from torso |
|  Do not dry skin |  Do not dry skin |

Chapter 11: Environmental Illness

| Active Cooling | Aggressive Cooling (Order of Preference) |
|--|--|
|  Pour water on torso |  Immerse body in cool water |
|  Fan skin |  Immerse forearms in cool water |
| |  Pour water on torso |
| |  Fan skin |
|  If person is alert, provide cool drink |  If person is alert, provide cool drink |

Frostbite

What to Look For

A. Superficial Frostbite

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

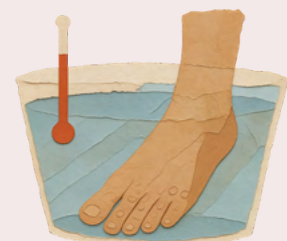
B. Deep Frostbite

- 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



Care

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



Chapter 11: Environmental Illness

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



Hypothermia



Care

- Starting with the outside ring, assess the person's responsiveness, movement, shivering, and alertness. Decide whether each one is normal or impaired/absent.
- Provide the care described in the quadrant that matches the person's condition.



Cold Stressed, Not Hypothermic

- Reduce heat loss (add dry clothing)
- Provide high calorie food or drink
- Increase heat production (exercise)

Mild Hypothermia

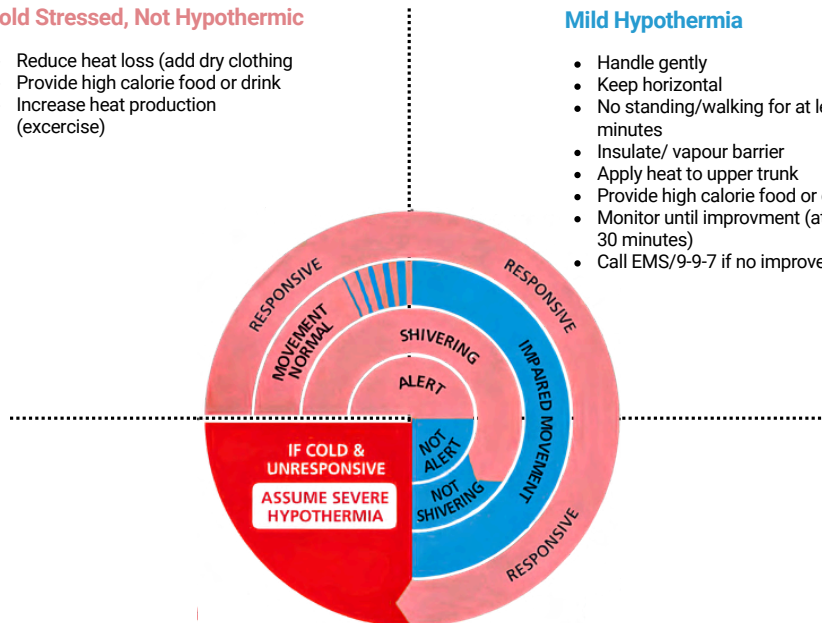
- Handle gently
- Keep horizontal
- No standing/walking for at least 30 minutes
- Insulate/ vapour barrier
- Apply heat to upper trunk
- Provide high calorie food or drink
- Monitor until improvement (at least 30 minutes)
- Call EMS/9-9-7 if no improvement

Severe Hypothermia

- Treat as moderate hypothermia, and
 1. If no obvious vital signs, then 60-second breathing check.
 2. If no breathing, then start CPR
- Call EMS/9-9-7

Moderate Hypothermia

- Handle gently
- Keep horizontal
- No standing/walking
- No drink or food
- Insulate/ vapour barrier
- Apply heat to upper trunk
- Call EMS/9-9-7



Chapter 12: Poisons

Call

If the person has an altered level of responsiveness or has difficulty breathing, call EMS/9-9-7 and get an AED. Otherwise, call the National Drug and Poison Information Centre.

Care

The specific care depends on the type of poison. Follow these general guidelines, along with any instructions from the Poison Control 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 Poisons - 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

- Check the packaging of the poison.
- Induce vomiting only if told to do so by the EMS dispatcher or the National Drug and Poison Information Centre
- If the person needs to go to the hospital, bring a sample of the poison (or its original container).



Inhaled Poisons - What to Look For

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

Chapter 12: Poisons

+ Care

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



Contact (Absorbed) Poisons - What to Look For

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



+ Care

- If the poison is a dry powder, brush it off the person's skin, being careful to avoid touching it.
- Remove any clothing covered in the poison.
- 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 Poisons - What to Look For

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



Chapter 12: Poisons

Care

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



Carbon Monoxide Poisoning

Carbon monoxide (CO) is a gas that has no smell, color, 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

- Get the victim away from the carbon monoxide source.
- Contact EMS/9-9-7
- Check for responsiveness and breathing.
- Monitor the victim
- Keep bystanders away from the area to prevent further exposure or shut the source.



Insect Stings

Call

Call EMS/9-9-7 and get an AED if there are any signs of a severe allergic reaction.

Care

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



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



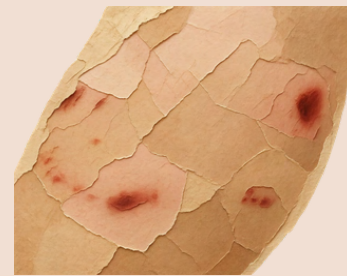
Animal Bites

Call

Call EMS/9-9-7

Care

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



Spider Bites

There are medically significant venomous spiders in Saudi Arabia, including certain species from the Cobweb (Theridiidae) and Sicariidae families. A bite from these spiders can cause severe reactions and requires prompt intervention.

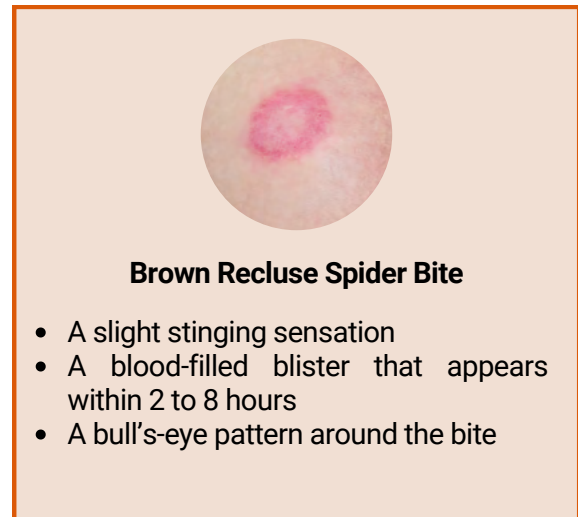


Chapter 12: Poisons

Most Common Venmous Spiders in Saudi Arabia



What to Look For



Call

Call EMS/9-9-7 if you know or suspect that the person was bitten by a venomous spider.

Care

- Have the person rest quietly and keep the bite elevated.
- Apply a cold pack wrapped in a thin, dry towel.



Chapter 12: Poisons

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.

Snake Bites

Call

If you know or suspect that the bite was caused by a venomous snake, call EMS/9-9-7.



Care

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



Chapter 12: Poisons

Stings From Marine Life

What to Look For

- Pain
- Rash and redness
- Swelling
- Puncture wounds or lacerations

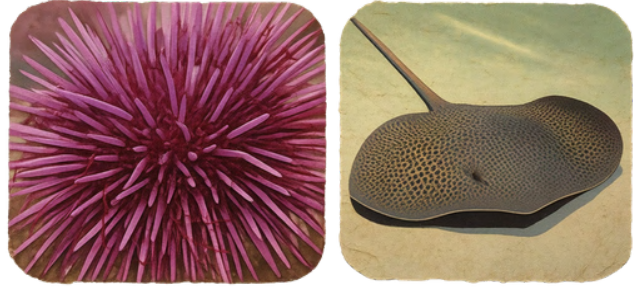


Call

Call EMS/9-9-7 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



- 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.
- While wearing gloves or using a towel, carefully remove any pieces of the animal.
- 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.
- Encourage the person to seek medical attention and to watch for signs of infection.



Chapter 13: 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/9-9-7:
When in doubt, call for help.



Prioritize:
Care for the most serious condition first.



Chapter 14: Respiration and Pulse Metrics

Evaluating a patient's vital signs is a core competency of emergency scene management. For a Life Ambassador, monitoring the respiration rate (breathing) and pulse rate (heart rate) serves as a critical window into the patient's clinical stability. Fluctuations below or above established normal limits indicate physiological distress and dictate the urgency of subsequent interventions and EMS dispatch updates.

1. Respiration Rate Metrics & Measurement Technique

Respiration rate is measured by counting the number of times a patient's chest rises and falls. One complete respiration includes both an inhalation (rise) and an exhalation (fall). When assessing breathing, always observe three key parameters: rate (breaths per minute), depth (deep, shallow, or normal), and effort (effortless vs. labored/strained using accessory muscles).

The "Stealth" Assessment Technique

Clinical Rule: Never tell a conscious casualty you are counting their breaths. When individuals know their breathing is being monitored, they voluntarily alter their pattern, leading to an inaccurate baseline reading.

Step-by-Step Execution

1. **Maintain Position:** Once you finish checking the patient's pulse, keep your fingers pressed against their wrist or arm exactly as if you are still counting their heart rate.
2. **Observe Chest Rise and Fall:** Shift your eyes to the patient's primary respiratory zone. One complete respiration cycle consists of one rise and one fall.
3. **Apply Age-Specific Observations:**
 - Adults and Children: Watch for the rising and falling movement of the chest wall, shoulders, or clavicles.
 - Infants: Infants primarily use the diaphragm to breathe. Focus your observation entirely on the abdominal/stomach area, as chest movement in infants can be highly subtle.
4. **Time and Calculate:**
 - Regular Patterns: Count the complete breath cycles for 30 seconds and multiply by 2.
 - Irregular Patterns or Infants: You must count for a full 60 seconds to ensure clinical accuracy.

Clinical Classifications

Normal Respiration

Normal respiration or eupnea is when the casualty breathes effortlessly, quietly, and within the expected age-specific range.

High Respiration Rate

High respiration rate or tachypnea is when casualty exhibits accelerated breathing that often indicates hypoxia, shock, anxiety, metabolic distress, or physical trauma.

Chapter 14: Respiration and Pulse Metrics

Low Respiration Rate

Low respiration rate or bradypnea is when the causality exhibits abnormally slow breathing typically caused by severe hypothermia, central nervous system depression, head injury, or advanced respiratory failure.

Absent Breathing

Absent breathing or apnea of a causality is a critical emergency requiring immediate rescue breaths or CPR.

Standardized Respiration Reference Table (AHA/ECC Criteria)

| Population | Normal Range (Breaths / Min) | Low / Critical Threshold (Bradypnea) | High / Critical Threshold (Tachypnea) | Observation Zone |
|------------------------------|------------------------------|--------------------------------------|---|------------------------|
| Adult (≥ 12 years) | 12 – 20 | Below 10 breaths/min | Above 20 breaths/min (Critical if >30) | Chest Wall / Shoulders |
| Child (1 – 11 years) | 15 – 30 | Below 15 breaths/min | Above 30 breaths/min | Chest Wall |
| Infant (< 1 year) | 30 – 60 | Below 30 breaths/min | Above 60 breaths/min | Abdomen / Stomach |

Operational Note: Always assess the quality of breathing alongside the rate. Look for agonal gasps (uncoordinated, infrequent, gasping breaths, which are a sign of cardiac arrest requiring immediate CPR), shallow depth, or the use of accessory muscles (intercostal retractions or nasal flaring), which signal advanced respiratory distress regardless of the numerical rate.

2. Pulse Rate Metrics & Measurement Technique

The pulse rate represents the palpable rhythmic expansion of an artery caused by the surge of blood ejected from the left ventricle of the heart.

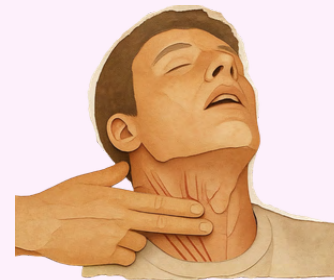
Tactile Assessment Rule: Never use your thumb to feel a patient's pulse. Your thumb contains its own strong arterial pulse which can easily mask or be confused with the patient's heart rate. Always use the pads of your index and middle fingers.

Chapter 14: Respiration and Pulse Metrics

Step-by-Step Execution by Population

A. Adult Patients

- **Conscious Adult (Radial Pulse Site):**
 - a. Turn the patient's hand palm-side up.
 - b. Locate the radial groove on the outer thumb-side of the wrist, just below the base of the thumb.
 - c. Apply firm but gentle pressure with the pads of your index and middle fingers until you isolate the rhythmic pulsation.
- **Unconscious Adult (Carotid Pulse Site):**
 - d. Locate the trachea (windpipe) at the center of the neck.
 - e. Slide your fingers laterally into the soft groove between the windpipe and the large neck muscle (sternocleidomastoid) on the side closest to you.
 - f. Press straight back gently to detect central perfusion.



B. Child Patients (1 – 11 Years)

Conscious/Unconscious Child (Radial or Carotid Sites):

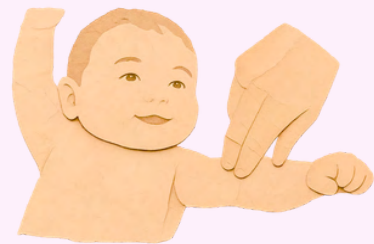
- For a calm, cooperative child, utilize the radial pulse on the thumb-side of the wrist exactly as done for an adult.
- If the radial pulse is weak, irregular, or difficult to isolate due to patient movement, immediately transition to the carotid pulse in the neck. Apply lighter pressure than you would on an adult to avoid compressing the sensitive pediatric airway.

C. Infant Patients (< 1 Year)

Clinical Rule: Never use the carotid pulse on an infant. An infant's neck is short and surrounded by thick subcutaneous fat pads, making the carotid artery highly unreliable to locate. Pressing too deeply can compress their delicate airway or vagus nerve, inducing bradycardia.

All Infant Assessments (Brachial Pulse Site):

- Place the infant flat on their back.
- Abduct the infant's arm, turning the palm upward, and flex the elbow slightly.
- Place your index and middle fingers on the inner upper arm, halfway between the elbow and the armpit, directly in the muscular groove between the biceps and triceps.
- Press firmly inwards toward the arm bone (humerus) to isolate the pulse.



Chapter 14: Respiration and Pulse Metrics

Standardized Pulse Reference Table (AHA/ECC Criteria)

| Population | Normal Range (Beats / Min) | Low / Critical Threshold (Bradycardia) | High / Critical Threshold (Tachycardia) | Primary Site |
|------------------------------|----------------------------|--|---|---|
| Adult (≥ 12 years) | 60 – 100 | Below 60 bpm | Above 100 bpm | Radial (Conscious) Carotid (Unconscious) |
| Child (1 – 11 years) | 70 – 130 | Below 70 bpm | Above 130 bpm | Radial (Preferred) Carotid (Alternative) |
| Infant (< 1 year) | 100 – 160 | Below 100 bpm | Above 160 bpm | Brachial (Always) |

Operational Note: In addition to the numerical rate, document the volume (is the pulse strong and bounding, or weak and thready?) and the rhythm (is it regular or irregular?). A weak, rapid ("thready") pulse combined with cool, clammy skin is an explicit system indicator of worsening medical shock requiring rapid intervention and position optimization.

3. Integrated Emergency Action Protocol

When a Life Ambassador encounters vital signs falling outside of normal physiological windows, the following standardized operational sequence must be initiated:

- 1. Identify Inconsistencies Early:** If an adult patient exhibits a respiratory rate exceeding 30 breaths/minute or a pulse rate exceeding 120 bpm while at rest, their internal compensatory mechanisms are failing. Immediate escalation is required.
- 2. Optimize Oxygenation and Perfusion:** Loosen restrictive clothing around the neck and chest. Reassure the patient to control panic-induced hyperventilation. If trauma is absent and medical shock is suspected, place the patient in the appropriate shock position (supine with legs elevated 20–30 cm).
- 3. Update Emergency Dispatch:** When communicating with the Saudi Red Crescent 997 dispatchers, deliver exact, quantitative vital metrics to ensure correct triage coding.
 - Example: "Be advised, adult patient is experiencing tachypnea at 28 breaths per minute and tachycardia at 115 beats per minute, indicating systemic distress."
- 4. Continuous Reassessment:** Recount and log vitals every 5 minutes for unstable patients or every 15 minutes for stable individuals, compiling a clear trend report to hand over to EMS arrival.

Saudi Emergency Services Communication Directory



997

Saudi Red Crescent - Ambulance



112

General Emergency Services



999 or 911

Saudi Police



993

Saudi Traffic Police



996

Saudi Highway Patrol



998

Saudi Civil Defense - Fire Emergency



994

Saudi Coast Guard



966

Saudi Natural Disaster



+966 11 232 4180
or +966 11 232 4189

Saudi Poison Control



800 127 7000

King Fahd Medical City Poison Control



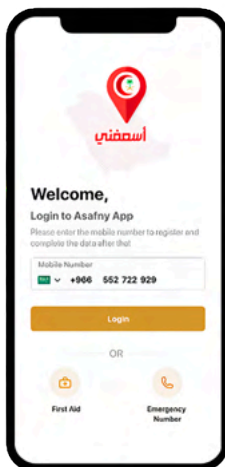
1919

Domestic Violence Hotline



116111

Child Protection Hotline



Digital Emergency Applications (Smart Location Dispatch)

"Asafny" (أسعفني): The official Saudi Red Crescent Authority application for submitting immediate ambulance requests, tracking response status, and sending distressed location pins.

Essential First Aid Kit Content

1. Personal Protective Equipment (PPE)

- Disposable non-latex gloves (multiple sizes, typically nitrile)
- Pocket mask or face shield with a one-way valve (for performing safe rescue breaths during CPR)
- Antiseptic wipes or hand sanitizer (for cleaning the rescuer's hands)
- Eye protection/goggles (to protect against fluid splashes)



2. Bleeding & Wound Management Material

- Sterile gauze pads (various sizes: 5x5 cm, 10x10 cm)
- Abdominal/Combine pads (large, thick dressings for heavy bleeding)
- Conforming roller bandages (elastic or gauze wraps to secure dressings)
- Adhesive plastic bandages (band-aids in assorted shapes and sizes)
- Triangular bandages (for securing splints, forming slings, or improvising tourniquets)
- Tactical/Commercial tourniquet (essential for catastrophic arterial extremity hemorrhage)
- Adhesive cloth tape (to anchor dressings and bandages)



3. Injury & Medical Tools

- Trauma shears/scissors (with blunt tips to safely cut away clothing)
- Fine-tipped tweezers (for removing splinters or ticks)
- Instant cold packs (for treating contusions, sprains, and minor burns)
- Malleable or rigid splint (SAM splint or equivalent for joint/bone immobilization)
- Space/Emergency blanket (to preserve body heat and prevent shock)



Essential First Aid Kit Content

4. Topical Solutions & Emergency Medications

- Sterile saline solution or clean water vials (for eye wash or wound irrigation)
- Antibiotic ointment (for minor superficial cuts and scrapes)
- Hydrocortisone cream or calamine lotion (for minor insect stings or skin irritations)
- Aspirin (ASA) tablets (81 mg low-dose or 325 mg regular—essential to keep on hand for suspected heart attacks, to be administered after screening for allergies or stroke)



Life Ambassador Toolkit Maintenance Rule

To keep your first aid kit operationally ready, it should be checked monthly. Always verify that the non-latex gloves have not degraded, emergency medication or ointment expiration dates are valid, and sterile packages remain completely sealed.

Acknowledgment

The development and realization of the *Safeer Al Hayat* (Life Ambassador) initiative and this comprehensive first aid guide are the results of vision, strategic alignment, and dedicated teamwork across the Riyadh Second Health Cluster (R2HC). We extend our deepest gratitude to the leadership and teams who have engineered this standardized blueprint for community resilience and safety.

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Together, through institutional synergy and a shared commitment to human life, we honor the collective effort that makes our community the heartbeat of our safety network.

