



جَامِعَةُ نِزْوَى  
University of Nizwa

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# First Aid Guide for Medical Emergencies



# Acknowledgement

The UoN First Aid Manual is the result of continuous collaborative efforts of the College of Nursing and the Risk Management Office. A team headed by Dr. Zabidah Bint Putit refined and guided the development of the First Aid Manual. The First Aid Manual was developed with intention of educating the community and thereby promoting a culture of health and safety.

This manual is dedicated to the **UoN First Aid Manual Development Team** who contributed their knowledge, time, and experience towards helping the community acquire life-saving skills to effectively respond in emergency situations.

This manual is also dedicated to all its readers who are motivated and prepared to take action when an emergency strikes.

The team would like to express its sincere thanks to the Chancellor (UoN), Dr. Ahmed bin Khalfan Al Rawahi and the Health & Safety Officer, Mr. Nasser Zahran Al Kindi for their constant encouragement and support.

Last but not the least; the manual is dedicated to the UoN Sick Bay staff (*Campus Medical Service Staff*) for their prompt, professional and tireless efforts in addressing medical emergencies on campus.

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*You can save a life; you can make a difference by learning and  
administering first aid in emergency scenarios*

*“Carefulness costs you nothing. Carelessness may cost a life.”*

*—An old quote from 1900s*

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## Preface

The purpose of the First Aid Manual is to guide the staff, students and community on the primary skill set and procedures to deal with different types of medical emergencies.

Every individual encounters injury, illness or emergency situations at some point of time in their life. It is essential for us to recognize such medical emergency scenarios and to possess the basic knowledge and skills to summon the required help; and to perpetuate basic care until the help arrives. The Manual encompasses all possible medical scenarios that we encounter in our daily lives and gives us a step by step insight on the required first aid procedures with illustrations to help you understand the problem at hand.

Although the manual is designed to provide you with a good knowledge and skills set, it is advised that you also take a formal first aid course from community organizations (HEIs, PACDA, Companies etc.) or recognized medical centers (Local hospitals and rehabilitation centers) that provide such training. We also recommend you to refresh your first aid skills on a regular basis based on the contemporary trends. It is advised to stay informed of any changes in emergency care procedure.

We hope that you will enjoy learning about medical emergency response and care; and enhance your knowledge and skills as you proceed through the manual.

Should there be any comments or recommendations for improving this manual then please write to us on [lohani@unizwa.edu.om](mailto:lohani@unizwa.edu.om). To request any first aid skills training workshop, please contact the UoN Health and Safety Officer [nasserkindi@unizwa.edu.om](mailto:nasserkindi@unizwa.edu.om)

Thank you for being part of this noble initiative – Together, We can make a difference!

## Disclaimer

This manual is not intended to establish any policy/ procedure, or a standard of care. It is advised that all first aiders obtain training from a qualified trainer and recognize the limits of their competence. The UoN is not responsible for, and expressly disclaims all liability for, damages of any kind arising out of use, reference to, reliance on, or performance of such information.

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## EMERGENCY CONTACT NUMBERS

### External Support Services (OFF CAMPUS)

1	<b>AMBULANCE</b>	<b>9999, 25449361, 25447776</b>
2	<b>HOSPITAL</b>	9999 25449361 (Nizwa Hospital) 25447776 (Badr Al Sama Hospital) 24563625 (Khawla Hospital) 25449155
3	<b>POLICE</b>	9999, 25425222, 25425559
4	<b>FIRE DEPARTMENT</b>	9999
5	<b>WEATHER FORECAST</b>	24519113
6	<b>ELECTRICITY AND WATER</b>	1442(Water), 25431084(Electricity)
8	<b>THREATS/ BLACKMAIL HARRASMENT</b>	2456 9701
9	<b>MUNICIPALITY</b>	25410084

### Internal Emergency Contacts (ON CAMPUS)

1	<b>HEALTH CARE UNIT (Sick Bay/Ambulance)</b>	<b>601, 602</b>
2	<b>GANA POLY CLINIC</b>	25443311 ( prefix 9 when dialing from campus phone)
3	<b>HEALTH AND SAFETY OFFICE</b>	636
4	<b>RISK MANAGEMENT OFFICE</b>	973
5	<b>ELECTRICITY /AIR CONDITIONER</b>	888, 604
6	<b>TELECOMMUNICATION AND INTERNET</b>	373, 626
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## 1. What is First Aid ?

**First aid** is the initial medical care assistance or treatment given to a casualty or a sick person for any injury or sudden illness before the arrival of ambulance or qualified paramedics. The person who provides this initial treatment is known as the first aider.

Goal of the First Aider	Considerations of First Aider
<ul style="list-style-type: none"> <li>• To preserve life.</li> <li>• To alleviate suffering.</li> <li>• To prevent further illness or injury.</li> <li>• To promote recovery.</li> <li>• To summon Emergency Services if necessary</li> </ul>	<ul style="list-style-type: none"> <li>• To assess the severity of the situation</li> <li>• To stay safe and calm at all times.</li> <li>• To be aware of ones' own abilities and limitations.</li> <li>• To assist the casualty with the help of others if possible.</li> <li>• Prevent cross-contamination between yourself and the casualty.</li> </ul>

## First Aid Kit

### What are the contents of a standard First Aid Kit?

- 1. Plasters/adhesive Band-Aid:** Used for small cuts and grazes
- 2. Sterile Dressings:** Used to apply pressure to larger wounds and help to stop bleeding
- 3. Bandages/ tourniquets/Splints:** Used to support joints, hold dressings in place, put pressure on wounds and to stop swelling
- 4. Cold compresses:** Used to treat insect bites and stings. To cool thermal burns and reduce swelling from sprains.
- 5. Disposable gloves:** Used to reduce the risk of infection
- 6. Face shields or pocket masks:** Used to prevent infection when you give rescue breaths during CPR.
- 7. Cleansing wipes/ alcohol free wipes:** Used to clean the skin around the wound.
- 8. General Adhesive Tape:** Used to hold dressings or the loose end of bandages in place
- 9. Pins and clips:** Used to fasten the loose end of bandages.
- 10. Scissors or tweezers:** Used to cut bandages or someone's clothing if you need to get to a wound. Tweezers can also remove ticks, bee stingers, or pieces of glass
- 11. Thermometer:** To check the body temperature.
- 12. Antiseptic/rash Cream:** To reduce septic in the wound, burns and stings.





### 13. Blankets

**14.Medicines:** painkillers like paracetamol or ibuprofen. (infant paracetamol for children) , Antihistamine for allergy and aspirin to possibly save the life of someone with a heart condition. Besides the mentioned medicines, you can customize your first aid kit to contain additional prescribed medications if needed.

**15.**eye wash and eye bath



## 2. Heat Related Emergencies

**Heat exhaustion** happens when people work /play or are continuously exposed to a hot and humid environment causing loss of their body fluids through excessive sweating, thereby causing their body to overheat and become dehydrated. The body temperature may rise as high as 104° F (i.e., 40° C) but doesn't exceed that limit. It can happen suddenly or gradually over a course of few minutes.

**Heatstroke** also known as **sun stroke** may develop following an untreated heat exhaustion. It occurs when the body's temperature rises above 40° C (105° F) and the body's immune cooling system stops working. Heat stroke develops rapidly, and can be fatal if medical attention is not sought immediately.

Signs and Symptoms	
Heat Exhaustion	Heat Stroke
<ul style="list-style-type: none"> <li>• Confusion</li> <li>• Dark-colored urine (<i>A sign of dehydration</i>)</li> <li>• Fatigue and dizziness</li> <li>• Cool, moist skin with goose bumps or goose flesh (hairs of the skin stand up) when exposed to heat fatigue,</li> <li>• Headache</li> <li>• Muscle or abdominal cramps,</li> <li>• Nausea, vomiting, or diarrhea,</li> <li>• Pale skin</li> <li>• Profuse sweating,</li> <li>• Rapid heartbeat,</li> <li>• Fainting</li> </ul>	<ul style="list-style-type: none"> <li>• Throbbing headache</li> <li>• Dizziness and light-headedness</li> <li>• Lack of sweating</li> <li>• Red skin, hot and dry skin,</li> <li>• Muscle weakness or cramps,</li> <li>• Rapid shallow breathing</li> <li>• Seizures and unconsciousness.</li> <li>• Body temperature get higher than 40°C (&gt;105 F)</li> </ul> <p><i><u>Note:</u> The External body temperature might seem almost normal however the internal temperature might be higher.</i></p>

## How to Manage?

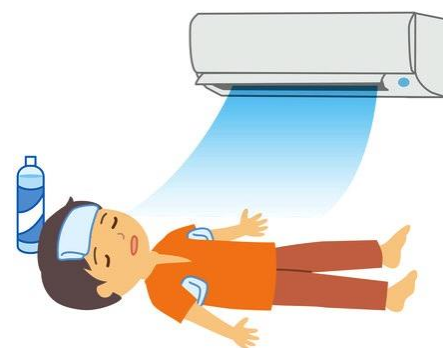
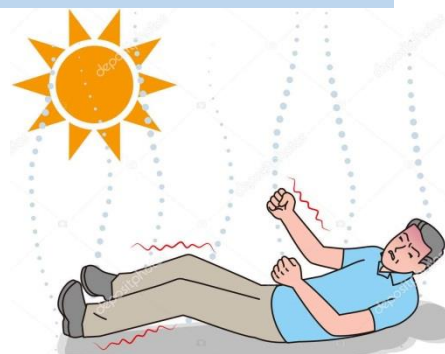
### Heat Exhaustion – What to do?

1. Move the person out of heat/sun and bring into a shady or cool place.
2. Lay the person down and elevate the legs and feet.
3. Remove tight or heavy clothing.
4. Have the person drink cool water or other non-alcoholic beverages without caffeine. Do not give fizzy drinks as they contain caffeine.
5. Cool the person by fanning or spraying/sponging with cool water.
6. Monitor the person's condition
7. **Call 9999 or the local emergency number** if signs or symptoms worsen



## Heat Stroke – What to do?

1. Call 9999 or the local emergency number.
2. Immediately move the person out of the heat to indoors or cool shady place.
3. Remove excess clothing.
4. Cool the person by whatever means available:
  - Soaking in cool water in a bath tub.(if available)
  - Sponging with cool water.
  - Fanning while misting with cool water
  - Placing ice packs or cool wet towels on the neck, armpits and groin.
  - Covering with cool damp sheets.
5. Let the person drink cool water/ fresh fruit juice to rehydrate, only if conscious.
6. Do not give sugary, caffeinated or alcoholic beverages.
7. Avoid giving extremely cold drinks, as these can cause stomach cramps.
8. Begin CPR if the person loses consciousness and shows no signs of circulation and breathing.



## Precautions

During summer/ sunny hot weather, it is advisable to:

- Slow down and avoid arduous activity and eat healthy snacks at short intervals.
- Avoid excessive exposure to sun.
- Avoid/defer outdoor games and activities.
- Remain indoors as much as possible.
- Use coolers and air conditioners indoors and in vehicles
- Conserve electricity not needed to keep you cool.
- Wear loose-fitting, light color, lightweight clothing
- Wear wide brimmed hat, head scarf or cap.
- Drink plenty of fluids, even if you do not feel thirsty (*Lime juice and detox water keeps you hydrated for long*)
- Take frequent breaks if you work outdoors.
- Avoid caffeinated drinks like coffee, tea and aerated drinks.
- Eat fruits and yoghurt to balance your body temperature.



- NEVER forget or leave the children or pets alone in vehicles. A few minutes can be proving to be deadly even if the windows are partially open.
- The temperature in a parked car is usually hotter than the outside temperature. (*The temperature inside a car parked in hot sun can elevate between 5°-15° C from the actual outside temperature*)
- If you witness any children or pet unattended in parked car, then call 9999.

### 3. Heart Attack and Cardiac Arrest

**Heart Attack** occurs when the blood flow to a section heart muscle is reduced due to blood clot caused by plaque in the artery. Reduced/lack of blood flow causes the tissues of heart muscle to die, causing severe pain in chest. The longer the person goes without treatment, the greater the damage.

**Cardiac arrest** happens due to electrical malfunctioning of the heart disrupting its pumping causing the heart to stop beating completely or too ineffectively, constricting the blood flow (oxygen) to the brain, lungs and other vital organs. Within seconds, the person loses consciousness and has no pulse. Death might occur within minutes if the victim does not receive treatment.

Signs and Symptoms of Heart Attack	Signs and Symptoms of Cardiac Arrest
<ul style="list-style-type: none"> <li>• Difficulty or trouble in breathing</li> <li>• Chest pain, discomfort and pressure</li> <li>• Radiating pain to the jaw and shoulders</li> <li>• Pallor or ashen grey color of the face</li> <li>• Cold sweats</li> <li>• Dizziness, nausea and vomiting</li> <li>• Epigastric pain</li> <li>• Loss of consciousness</li> </ul>	<p>Cardiac arrest happens without warning. Although some of these symptoms might occur prior to a cardiac arrest</p> <ul style="list-style-type: none"> <li>• Fatigue or weakness.</li> <li>• Shortness of breath.</li> <li>• Fainting.</li> <li>• Dizziness or light headedness.</li> <li>• Heart palpitations. (irregular beats)</li> <li>• Chest pain.</li> </ul>

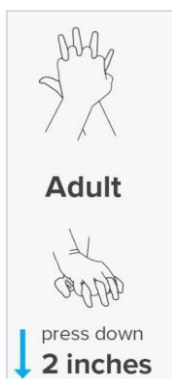
### How to Manage?

#### What to do before the Paramedics arrive?

- **In case of Heart Attack**, if the person is not allergic to aspirin; give him/her a 325mg of aspirin (for adult) and 81 mg aspirin (for child). If the person stops breathing, then perform CPR.
- **Perform Cardiopulmonary Resuscitation (CPR) for Cardiac Arrest Patient.**  
The **main purpose** of CPR is to partially restore the flow of oxygenated blood to the brain and heart. The **objective** is to delay tissue death and to buy some time for the patient for a successful resuscitation without any permanent damage to the brain. Performing immediate CPR increases the victim's chances of survival during cardiac arrest. CPR is administered only if when there is no pulse. ALWAYS activate EMS (call 9999) before starting CPR.
- **How to Perform CPR? Detailed Steps:**
  1. Ensure that the patient is lying on his back in a straight position
  2. Open the airway tilting the head back slightly so as to lift the chin up.
  3. Kneel and sit down besides the patient.







4. Keeping your arms straight, place the heel of your hand at the center of the patient's chest. (between the nipples)
5. Keep your arms straight and cover the first hand with the heel of your other hand interlocking the fingers together. Ensure that the fingers of your hand over the chest are raised slightly upwards, so they do not touch and damage the patient's chest or rib cage.
6. Lean forward so that the position of your shoulders is directly over the patient's chest.
7. Use your upper body weight as you start compressions by pressing down on the chest (*approximately 2 inch down and NOT greater than 2.4 inches*) delivered at a rate of at least 100 compressions per minute. (*which is 2 compressions per second*) Release the pressure but don't release your hand. The rescuer's hands must stay in contact with the patient's chest during compressions.
8. If you get exhausted ask a by-stander to continue compressions while you restore your strength to continue.
9. If you aren't a trained/skillful in CPR, continue chest compressions until there are signs of movement or until emergency medical personnel take over
10. If you are trained/ skilled in CPR then deliver 2 rescue breaths after every 30 compressions.
11. To deliver rescue breaths open the patient's airway by tilting his head and lifting up his chin, then pinch the patient's nose shut and place your mouth over the patient's mouth covering completely. Now blow in the patient's mouth making his chest rise. Do not breath/blow in with extreme force.
12. Release your mouth and do it again for the second time. (*i.e, 2 breaths after every 30 compressions*) Note that the rescue breaths must last one/two second only and not more than that. Thirty chest compressions followed by two rescue breaths is considered one cycle. Check pulse after every 5 cycles of CPR. Continue the compressions and ventilating breaths until the patient regains pulse/breathing, or an AED becomes available, or the medical responder arrives at the scene.



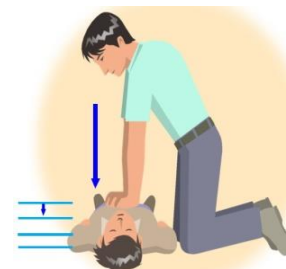
**1. Chest Compressions**



**2. Open Airway**



**3. Give Rescue Breaths**



**4. Repeat CPR Cycle**


## 4. HYPOGLYCEMIA

Hypoglycemia occurs when the person has low blood sugar (Glucose) levels due to hunger and over-exercising without eating enough.

Possible Causes	Signs and Symptoms
<ul style="list-style-type: none"> <li>Not eating on time</li> <li>Prolonged strenuous exercise</li> <li>Certain medications: insulin and oral hypoglycemic agents (OHA), some antibiotics (Bactrim), anti-hypertensive drugs (beta-blockers)</li> <li>Alcohol use</li> <li>Prolonged fasting</li> <li>Missing meals</li> <li>Severe malnutrition</li> <li>Diseases of the liver, kidneys, pancreas</li> <li>Early pregnancy</li> <li>Stomach surgery</li> </ul>	<p><b>1. Mild hypoglycemia</b></p> <ul style="list-style-type: none"> <li>Feeling of hunger/fatigue</li> <li>Nausea</li> <li>Jittery or nervousness</li> <li>Sweating</li> <li>Cold clammy skin</li> <li>Irritability</li> </ul> <p><b>2. Moderate Hypoglycemia</b></p> <ul style="list-style-type: none"> <li>Short –temperedness</li> <li>Trembling</li> <li>Fast heart beat</li> <li>Nervousness, fear ,confusion</li> <li>Blurred vision /faintness</li> <li>Unsteady gait and pale skin</li> </ul> <p><b>3. Severe Hypoglycemia</b></p> <ul style="list-style-type: none"> <li>Seizure</li> <li>Coma</li> <li>Death</li> </ul> <p>Blood sugar less than 70 mg/dL.</p>

**BLOOD GLUCOSE CHART**

Mg/DL	Fasting	After Eating	2-3 hours After Eating
Normal	80-100	170-200	120-140
Impaired Glucose	101-125	190-230	140-160
Diabetic	126+	220-300	200 plus




### How to Manage?

- Assist the person to sit down and give them something sugary (sweet) like fruit juice / a fizzy drink/ three teaspoons of sugar/or a chocolate candy.
- If the person begins to feel better, offer food, particularly carbs like bread to sustain their blood sugar – a jam sandwich is great.
- If the person is diabetic and has her/his own glucose testing kit, then help them to check the glucose level.
- If the person does not improve quickly or lose consciousness, then put them in recovery position and call 9999.
- While waiting for medical assistance, keep checking responsiveness, breathing and pulse of the patient. If they stop breathing, perform a CPR.

P.S. Do not attempt to give an unconscious casualty anything to eat or drink. And **never** give them insulin as this will further lower their blood sugar and could kill them.

## 5. HYPERGLYCEMIA

Hyperglycemia occurs when the person has a very high amount of blood sugar (Glucose) levels in their bloodstream.

Possible Causes	Signs and Symptoms
<ul style="list-style-type: none"> <li>• High consumption of carbohydrates</li> <li>• Stress / worry</li> <li>• Sedentary lifestyle/lack of exercise</li> <li>• Prolonged Illness</li> <li>• Chronic infections</li> <li>• Fever/vomiting</li> <li>• Skip or forget your insulin or oral glucose-lowering medicine.</li> <li>• Consuming alcohol/ fruit juices on an empty stomach</li> <li>• Dehydration</li> <li>• Certain medications, such as steroids.</li> <li>• Fruity-smelling breath</li> </ul>	<ul style="list-style-type: none"> <li>• Increased thirst.</li> <li>• Frequent urge to urinate.</li> <li>• Dry mouth.</li> <li>• Stomach pain.</li> <li>• Weight loss.</li> <li>• Headaches.</li> <li>• Bacterial/fungal infections (<i>Skin conditions</i>)</li> <li>• Poor healing of wounds.</li> <li>• Trouble concentrating.</li> <li>• Blurred vision /decreased eye sight</li> <li>• Fatigue (weak, tired feeling)</li> <li>• Blood sugar more than 180 mg/dL.</li> <li>• Frequent bed wetting</li> </ul> 

### How to Manage?

- Call 9999 for cases of hyperglycemia.
- If the person is conscious and cooperative, ask when the last time they ate/took the insulin dose.
- Check their blood sugar using the glucose meter and accordingly medicate them using their prescribed insulin meds.
- If the person is unconscious, do not give insulin as it might cause an insulin shock and kill the person. Just wait for medical help.
- Follow any instructions from the dispatcher as much as possible.
- If the person does not improve quickly or lose consciousness, then put them in recovery position.
- While waiting for medical assistance, keep checking responsiveness, breathing and pulse of the patient. If they stop breathing, perform a CPR.

#### Preventive Measures:

- Drink excess water. Water helps remove excess sugar from your blood through urine.
- Regular exercise can help lower your blood sugar. However it's better to consult the doctor before doing so.



## 6. FAINTING

Fainting also known as syncope or "passing out" is the temporary loss of consciousness usually related to insufficient blood flow to the brain, but the victim eventually regains complete consciousness within a few minutes.

Possible Causes	Signs and Symptoms
<ul style="list-style-type: none"> <li>• Low blood sugar</li> <li>• Heart problems</li> <li>• Chronic anemia</li> <li>• Anxiety</li> <li>• Extreme pain</li> <li>• Intense emotional stress</li> <li>• Use of alcohol or drugs</li> <li>• Seizures</li> <li>• Extreme fear</li> </ul>	<p><b><i>Before fainting spell:</i></b></p> <ul style="list-style-type: none"> <li>• A floating feeling</li> <li>• Dizziness</li> <li>• Confusion</li> <li>• Nausea</li> <li>• Light headedness</li> <li>• Shortness of breath</li> <li>• Palpitation (fast heart beat)</li> <li>• Loss of balance leading to falls</li> <li>• Face may appear pale</li> <li>• Sweating</li> <li>• Vomiting</li> <li>• Yawning</li> </ul>

### How to Manage?

***If the individual is about to faint:***

- Have him/her sit down with head between knees.
- Assist him/her to lie down and elevate the legs.

***If the individual has fainted:***

- Make the person safe.
- Lay the person down flat on his/her back.
- Check the airway for signs of breathing.
- Elevate the person's legs to restore blood flow to the brain.
- Loosen tight clothes around neck, chest and abdomen.
- If not breathing and without pulse, start CPR.
- **DO NOT** move the person, if he/she has sustained any obvious neck or back injuries while fainting.



***Call the ambulance if the person:***

- Does not regain consciousness within 1-2 minutes
- Is not breathing or moving
- Has problem talking or seeing
- Is experiencing a chest pain?
- Has sustained serious injuries while fainting

## 7. CHOKING

Choking occurs when a foreign object lodges in the throat or windpipe, blocking the flow of air.

Signs of Mild Choking	Signs of Severe Choking
<ul style="list-style-type: none"> <li>• There is good air exchange.</li> <li>• Person can cough forcefully.</li> <li>• Person may wheeze between coughs.</li> </ul>	<ul style="list-style-type: none"> <li>• Clutching the neck</li> <li>• Inability to speak</li> <li>• Difficulty in breathing</li> <li>• Weak, ineffective cough or no cough at all</li> <li>• High pitched noise while inhaling / no noise at all</li> <li>• Possible cyanosis (<i>De-oxygenation / Turning Blue</i>)</li> </ul>

### How to Manage?

#### Administering Mild Choking:

- Stay with the person
- Ask him/her not to panic. Panicking will only increase the heart rate and need for air, making it more worse.
- Ask the person to cough forcefully to clear the airway.
- If Choking persists activate 9999 and perform a Heimlich Maneuver



#### Administering Severe Choking:

In case of Severe Choking, a first aid procedure called **Heimlich maneuver** is deployed for dislodging the obstruction from the person's windpipe. The steps for performing **Heimlich maneuver** depend on who you're aiding:

1. Another person who isn't pregnant/ A child (>2 years).
2. A pregnant woman.
3. An infant.
4. Yourself.
5. A person who is unconscious.



#### 1. Standard Heimlich maneuver for another person/Child:

- 1.1. Stand behind the person. Place one foot slightly in front of the other for balance. Wrap your arms around the waist. Tip the person forward slightly. If a child is choking, kneel down behind the child (*Abdominal Thrust*)
- 1.2. Make a fist with one hand. Position it slightly above the person's navel.
- 1.3. Grasp the fist with the other hand. Press hard into the abdomen with a quick, upward thrust — as if trying to lift the person up.
- 1.4 Perform between six and 10 abdominal thrusts until the blockage is dislodged



## 2. Heimlich maneuver on a pregnant woman/an obese person:

- 2.1. Position hand at the base of the breast, just above the joining of lower ribs bone. (*Chest Thrust*)
- 2.2. Proceed as with standard Heimlich maneuver pressing hard into the chest with quick thrust until the foreign object is expelled.

*P.S: Ask the victim if she is pregnant, unless it is obvious. Using the standard Heimlich maneuver might harm the fetus even in early stages of pregnancy.*



## 3. Heimlich maneuver on an infant:

- 3.1. Place the infant face down across your forearm (resting your forearm on your leg) and support the infant's head with your hand.
- 3.2 Give five forceful blows to the back with the heel of your hand. You may have to repeat this several times until the obstructing object is coughed out.
- 3.3 Turn the baby over. With two fingers one finger width below an imaginary line connecting the nipples, give four forceful thrusts to the chest.
- 3.4 Give five forceful blows to the back with the heel of your hand. You may have to repeat this several times until the obstructing object is coughed out.
- 3.5 You may have to repeat this several times until the obstructing object is coughed out.



## 4. Heimlich maneuver on one's own-self:

If you are alone and cannot get to cough out the stuck foreign object and are struggling for air then you should perform self-Heimlich maneuver before you fall unconscious.

- 4.1 Make a fist with one hand. Place your thumb side of the fist below your rib cage and above your navel.
- 4.2 Grasp your fist with your other hand.
- 4.3 Proceed as with the Heimlich maneuver, pressing hard into the chest, with a quick thrust.
- 4.4 You can forward lean on chair to increase/support your thrust pressure. Repeat until the foreign object is dislodged.



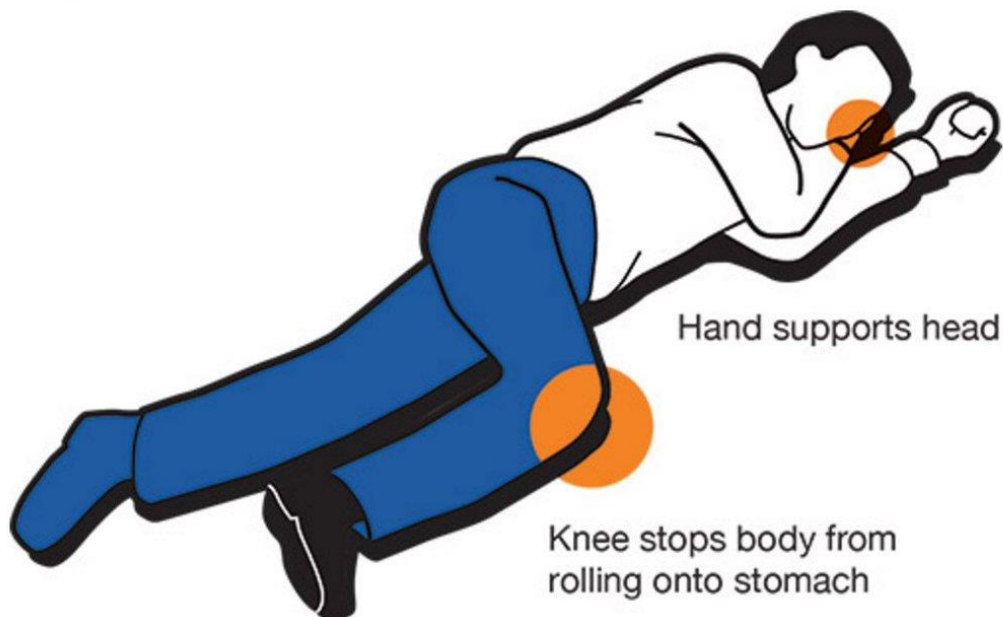
## 5. To clear the airway of an unconscious person:

- 5.1 Position the person on his or her back, arms by side.
- 5.2 Call 9999 for help.
- 5.3 Check responsiveness, breathing and pulse.
- 5.4 If the person is unresponsive, not breathing, and with absent pulse, then proceed with CPR.
- 5.5 Before giving each breath, check the mouth for the foreign body.
- 5.6 If the foreign body is seen, turn the victim on his/her side and perform a finger sweep trying to remove the foreign body from the mouth. Only remove the foreign body if seen, do not attempt to remove if not seen.
- 5.7 Once the foreign body is removed and the person is conscious, place in recovery position and continue to monitor until EMS (Emergency Medical Service) arrives.



## The Recovery Position

### Keep the Airway Clear



Stay with person. If you must leave them alone at any point, or if they are unconscious, put them in this position to keep airway clear and prevent choking.



## 8. BLEEDING

Bleeding also known as a hemorrhage is the loss of blood due to an injury, wound, bites or cut. Bleeding can happen outside and inside the body.

Signs and Symptoms	
External Bleeding (Outside)	Internal Bleeding (Inside)
<p>Blood is an evident sign of external bleeding. Severe external bleeding can lead to the following symptoms</p> <ul style="list-style-type: none"> <li>• Pale, cool, clammy skin</li> <li>• Fast heart rate</li> <li>• Low blood pressure</li> <li>• Light-headedness</li> <li>• Unconsciousness</li> </ul>	<ul style="list-style-type: none"> <li>• Pain, tenderness or swelling over or around the affected area</li> <li>• Appearance of blood from the natural body opening, e.g. <i>bright red blood coughed up from the lungs</i></li> <li>• Vomited blood which may appear bright red or as dark brown "coffee grounds"</li> <li>• Blood-stained urine</li> <li>• Bleeding from excretory organs.</li> </ul>

### How to Manage?

#### Mild External Bleeding

1. Wash your hands before cleaning and dressing the wound.
2. Wear gloves if available to avoid infection.
3. Wash the wound with warm water. Don't use hydrogen peroxide or iodine to clean, it can damage tissue.
4. Apply antibiotic cream to reduce risk of infection
5. Cover the wound with a clean cloth or sterile dressing
6. Apply pressure to stop bleeding.
7. If blood soaks through the material, don't remove it. Put more cloth or gauze on top of it and continue to apply pressure.
8. Secure the wound with a bandage.
9. If the wound is on the arm or leg, raise the limb above the level of heart, so as to help slow the bleeding.
10. Wash your hands after giving first aid and before cleaning and dressing the wound.
11. Do not apply a tourniquet unless the bleeding is severe and not stopped with direct pressure.

P.S. If there is bruising to a limb and no external bleeding, use cold pack and transport to the hospital.



## Severe External Bleeding

Severe bleeding cannot be controlled by a simple bandage or by applying pressure. It is managed with *TOURNIQUETS* and *HEMOSTATIC DRESSINGS*

### 1. TOURNIQUETS

Tourniquets are constricting or compressing devices (*belts, bands etc*) used to control blood flow to a limb for a short period of time to prevent bleeding. Tourniquets are used only when the direct pressure fails to stop the blood.



### 2. HEMOSTATIC DRESSINGS



Hemostatic dressings refer to commercially prepared gauze or material made up of powder, granules or other formulations that stop or prevent bleeding. Hemostatic dressing is to be used in life threatening situation for open wound(s) where bleeding is not controlled by applying pressure.

## Nose Bleed (Epistaxis)

1. Sit upright and lean forward so as to reduce the blood pressure in the veins of your nose discouraging further bleeding. Sitting forward will prevent you from swallowing the blood, which can irritate your stomach.
2. Pinch your nose. Use your thumb and index finger to gently pinch your nostrils shut. Breathe through your mouth and continue to pinch for 10 to 15 minutes.
3. If the bleeding continues, repeat holding pressure for another 10 to 15 minutes. Keep your fingernails short and avoid picking/blowing your nose as this can re-initiate bleeding.
4. Keep your head higher than the level of your heart.
5. Apply some petroleum jelly to the inside of your nose using a cotton swab or your finger.
6. If bleeding stills continues after 30 minutes or you have frequent nose bleeds, then seek medical care immediately.



## Internal Bleeding






Internal Bleeding is one of the most serious consequences of trauma which can be caused by accidents, physical assaults, falls, gunshot and stabbing. Any of the aforementioned signs of internal bleeding after a trauma should be treated as a medical emergency.

## 9. BURNS

A burn is defined as the injury caused to the skin, its tissues and/or underlying muscles. Most burns are caused by fire, heat, electricity, chemicals, or radiation.

### CLASSIFICATION OF BURNS

Superficial burns (First Degree Burns)	Partial-thickness burns (Second Degree Burns)	Full-thickness burns (Third Degree Burns)
<ul style="list-style-type: none"> <li>Involve only the top layer of skin(epidermis)</li> <li>Cause skin to become red and dry (no blisters)</li> <li>Usually painful and the area may swell</li> <li>Usually heal within a week without permanent scarring</li> </ul> 	<ul style="list-style-type: none"> <li>Involve the epidermis and part of the lower layer of skin, the dermis.</li> <li>Skin becomes red and painful</li> <li>Have blisters that may open and ooze clear fluid, making the skin appear wet</li> <li>Skin may appear mottled and often swells</li> <li>Usually heal in 3 to 4 weeks and may scar</li> </ul> 	<ul style="list-style-type: none"> <li>All layers of skin and/or all the underlying structures (fat, muscles, bones and nerves) are destroyed.</li> <li>The skin may be brown or black (charred), with the tissue underneath sometimes appearing white.</li> <li>Can either be extremely painful or relatively painless.</li> <li>Scars the skin.</li> </ul> 

### How to Manage?

#### First Degree Burns



1. Remove the person from the source of the burn.
2. Check for life-threatening conditions.
3. Minimize shock. Keep the person from getting chilled or overheated.
4. Cool the burn with large amounts of cool running water, at least until pain is relieved.
5. Pat dry the burn with a clean soft cotton cloth.
6. Dress the burn with a topical antibiotic ointment like Bacitracin or Neosporin.
7. Do not use cold water/Ice as it might further damage the tissue.
8. Comfort and reassure the person.



### NOTE:

- In case of **chemical burn**, remove the chemical from the skin using a towel and hand gloves and repeat step 4, 5 and 6. If the burn is severe call 9999.
- In case of **electric burn**, make sure to turn off the power source before helping/touching the victim. Using a dry wooden object, such as a broom handle, try to push the person away from the electrical source. Do not use anything wet or made of metal. Check and manage any life-threatening conditions. Call 999 and perform CPR if the person is not breathing or is unconscious.
- For cosmetic /minor lab **radiation burns**, apply aloe Vera gel. If you feel nauseous, or begin to vomit shortly after radiation exposure, then seek medical attention immediately.
- For **sunburns** it's better to take precautions by using a sun screen lotion having a SPF>40. However if exposed to a burn, take a cool shower and apply aloe Vera gel all over the affected area. Check for symptoms of heat exhaustion/ heat stroke.

### Second Degree Burns



1. Wash your hands before cleaning a burn, as dirty hands can easily infect the open blisters
2. Burns can swell quickly, so take off accessories like jewelry, belts, and tight clothing. Do not prick the blisters.
3. Rinse the burn with cool water.
4. Pat the area dry with a clean soft cloth or gauze.
5. Do not apply sprays or butter on burns, because this traps the heat inside the burn.
6. If the burned skin or blisters have broken open, a bandage is needed to prevent infection. Apply a clean bandage loosely on the burn. Whenever your bandage gets wet or soiled.
7. Don't use a blanket or towel, because loose fibers can stick to the burns.
8. If a bandage is stuck to a burn, wet the bandage with warm water making it easier to remove the bandage.
9. If the burn is on a leg or an arm, keep the limb raised as much as possible for to decrease swelling.
10. Move the burned limb(s) normally to keep the burned skin from healing too tightly, which can limit movement.

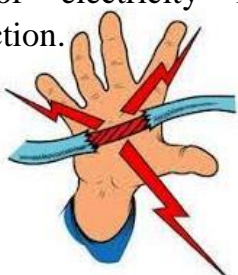
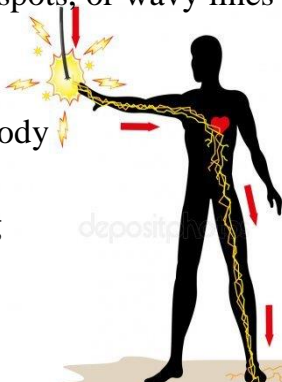
### Third Degree Burns

1. Remove the victim from the source of fire.
2. Don't remove burned clothing, as it might be sticking to the inner tissues.
3. Call 9999 or activate the emergency response system.
4. Evaluate the person for breathing and a pulse. Perform CPR if needed.
5. Do not use any kind of ointment/water to clean a third-degree burn. Wait for medical services to take over.



## 10. Electric Shock

An **electric shock** happens when a person comes in contact with an **electrical source of energy** (a live electric appliance). Electrical current flows through the contacted body part causing a shock and burning sensation. Exposure to **electrical** energy may result in no injury at all or may result in devastating damage or death, depending on the voltage level of the live electrical medium.

Possible Causes	Signs and Symptoms
<ul style="list-style-type: none"> <li>• Mischievous / careless exploration/ exposure to electrical appliances</li> <li>• Faulty appliances.</li> <li>• Damaged or worn out cords/extension leads.</li> <li>• Electrical devices and cords coming in contact with water.</li> <li>• Improper grounding of electricity in buildings during construction.</li> <li>• Downed power lines.</li> <li>• Lightning strikes.</li> <li>• Using landlines during lightning /thunder storms</li> </ul> 	<ul style="list-style-type: none"> <li>• Brief blackout followed by a period of confusion. (Vertigo)</li> <li>• Drooling or frothing at the mouth (seizures)</li> <li>• Eye movements (Eyes rolled-up)</li> <li>• Flashing bright lights, spots, or wavy lines before the eyes</li> <li>• Grunting and snorting.</li> <li>• Shaking of the entire body</li> <li>• Teeth clenching</li> <li>• Numbness and tingling</li> <li>• Unconsciousness</li> <li>• Breathing problem.</li> <li>• cataract</li> </ul> 

### How to Manage?

1. Don't touch the person under electrocution or any of the surrounding surfaces. Ensure that there is no water around on the floor.
2. Disconnect the electric medium or turn off the power at the control panel.
3. If you are unable to turn off the power source, then use a piece of wood for example, a broom handle, dry rope or dry clothing, to isolate the victim from the electric source. Just make sure you don't use anything that's wet or metal based.
4. If the victim is not breathing and has no pulse, begin (CPR).
5. Activate 9999
6. If the victim is awake and has sustained burns, then follow the first aid procedure prescribed for burns.
7. Keep the victim warm. Avoid use of any electrical device near water.



## 11. SEIZURES

A Seizure also known as convulsion is a brief episode of sudden abnormal electrical discharges in the brain which causes uncontrolled body movements, minor/full loss of consciousness, changes in behaviour and sensations. It is a disorder of the nervous system. Recurrent/frequent seizures are medically termed as Epilepsy.

Possible Causes	Signs and Symptoms
<ul style="list-style-type: none"> <li>• High fever (in infants and young children)</li> <li>• Injuries to the brain</li> <li>• Brain infections</li> <li>• Brain tumors</li> <li>• Lack of oxygen to the brain</li> <li>• Stroke</li> <li>• Low blood sugar levels (hypoglycemia)</li> <li>• Deficiency of sodium, calcium or magnesium</li> <li>• Withdrawal from alcohol and illicit drugs</li> </ul>	<ul style="list-style-type: none"> <li>• Brief blackout followed by a period of confusion. (Vertigo)</li> <li>• Drooling or frothing at the mouth</li> <li>• Eye movements (Eyes rolled-up)</li> <li>• Flashing bright lights, spots, or wavy lines before the eyes</li> <li>• Grunting and snorting.</li> <li>• Lack of control on bladder /bowel</li> <li>• Mood changes, such as sudden anger, unexplainable fear, panic, joy, or laughter</li> <li>• Shaking of the entire body</li> <li>• Tasting a bitter or metallic flavor</li> <li>• Teeth clenching</li> <li>• Temporary stop in breathing</li> <li>• Uncontrollable muscle spasms with twitching and jerking limbs</li> </ul>






### How to Manage?

1. Stay calm and do not restrain the person/interrupt the seizure. If unskilled then Call 9999.
2. Loosen tight clothing around the neck and waist.
3. Help the person lie down on a flat surface. Place something soft under the head.
4. Turn the person gently onto one side. This will help the person drain the saliva and prevent the tongue from blocking the airways.
5. Remove sharp objects and items from the scene to prevent injury.
6. Time the duration of the seizure. (Start and end time)
7. If the seizure lasts longer than 5 minutes/ reoccurs/ there is no consciousness or breathing after the seizure then activate EMS. (9999)
8. Do not overcrowd or splash water on the person's face or attempt CPR.
9. Do not give food or fluid until the person is fully awake and oriented.



## 12. ALLERGY

Allergy occurs when a person's body over-reacts to substance(s) called allergens in the environment that are harmless for most people. It is the hypersensitivity of the immune system to typically harmless environmental substance.

Common Allergens	Signs and Symptoms
<ul style="list-style-type: none"> <li>Dust mites.</li> <li>Pets.</li> <li>Plants /Flowers.</li> <li>Insect bites.</li> <li>Molds.</li> <li>Medicines.</li> <li>Food.</li> </ul>  	<ul style="list-style-type: none"> <li>Sneezing and an itchy, runny or blocked nose.</li> <li>Coughing.</li> <li>Wheezing.</li> <li>Red, itchy watering eyes.</li> <li>Itchiness across body parts.</li> <li>Swollen lips, tongue, eyes/face</li> <li>Sudden appearance of rashes</li> <li>Dry red cracked skin.</li> <li>Diarrhea.</li> <li>Stomach upset/Stomach cramps.</li> <li>Shortness of breath (Difficulty in breathing)</li> </ul> 

### How to Manage?

1. Avoid further exposure of the person to the triggering allergen or cause.
2. If rashes appear, apply cold soft compresses on the skin to sooth itchiness.
3. In case of mild symptoms, give a dose of **antihistamine** by mouth.
4. If symptoms are worse activate EMS.(9999) and use/administer an injectable epinephrine (such as EpiPen).*(Only if you are skilled to use it/ it's been prescribed)*
5. Take the person to the nearest health care facility for further evaluation.

### What is EPINEPHRINE PEN ?

Epinephrine, also known as adrenaline is used to quickly to improve breathing, stimulate the heart, elevate dropping blood pressure, reverse hives, and reduce swelling of the face, lips, and throat. An epinephrine auto injector is a medical device for injecting a measured dose of epinephrine by means of auto injector technology.

**Note:** A prescription is usually required to buy an EpiPen. Do not use epipen if you are hypertensive.



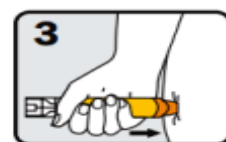
### How to give EpiPen



Form fist around EpiPen and PULL OFF BLUE SAFETY RELEASE



Hold leg still and PLACE ORANGE END against outer mid-thigh (with or without clothing)



PUSH DOWN HARD until a click is heard or felt and hold in place for 3 seconds REMOVE EpiPen



## 13. Anaphylaxis and Asthma

**Anaphylaxis** is a severe allergic reaction life-threatening and an emergency situation.

A person can have anaphylactic reactions to foods, insect stings, medications etc.

**Asthma** is the chronic inflammation of the bronchial airway causing difficulty to breath. This swelling or inflammation makes the airways extremely sensitive to irritations and increases their susceptibility to an allergic reaction.

Signs and Symptoms	
Anaphylaxis	Asthma
<ul style="list-style-type: none"> <li>• Difficulty in breathing</li> <li>• Noisy breathing or “wheezing”</li> <li>• Swelling of the face, mouth and tongue</li> <li>• Tightness in the throat (difficulty talking or sudden hoarseness of the voice)</li> <li>• Person collapses (loss of consciousness)</li> <li>• Pallor and lifelessness in children</li> </ul>	<ul style="list-style-type: none"> <li>• Shortness of breath</li> <li>• Frequent cough</li> <li>• Chest tightness or pain</li> <li>• A whistling or wheezing sound when exhaling (wheezing)</li> <li>• cold or allergies (sneezing, runny nose, cough, nasal congestion, sore throat, and headache)</li> </ul>

### How to Manage?

#### ANAPHYLAXIS

1. Stay with the person.
2. Immediately call 9999 for help.
3. Keep the airway open.
4. Have the person lie still on his or her back and elevate the legs.  
If unconscious, place in recovery position. If breathing is difficult allow them to sit
5. Don't give the person anything to drink.
6. In case the person has an epipen, help the person to inject on his/her thigh.
7. Begin CPR if person loses consciousness until professional help arrives.



#### ASTHMA

1. Sit the person upright comfortably and loosen tight clothing.
2. Get the person away from the trigger (if any)
3. If the person has asthma medication, such as an inhaler, assist in using it. Always shake the inhaler before administering the puff.



4. Let the person to take four breaths of each puff through (Give a total of four puffs)  
**Remember:** shake, one puff, four breaths.
5. After four puffs, wait four minutes. If the person still has trouble breathing, give another set of two puffs.
6. If there is still no improvement, call 9999 for an ambulance
7. If the person DOES NOT has an inhaler then seeks medical help immediately.
8. In the meanwhile, try to calm the person and guide the person to take deep slow breaths (*breathing out through the mouth*). This helps to normalize breathing and prevent hyperventilation.



9. Place a few drops of eucalyptus oil in a bowl of warm water. Make the person inhale these vapors. Eucalyptus oil has anti-inflammatory effects and opens the inflamed bronchial airway.

10. Drinks like coffee can help to open up the airways to a certain extent as its Caffeine is very similar to the asthma drug called theophylline. However it's not recommended in extreme wheezing cases as the person might choke on it, or boil three cloves in water and sip the tea slowly.



11. Massage a mixture of warm mustard oil and salt onto the chest until the symptoms subside.
12. Stay and observe the person until professional help arrives or until the person is transported to the nearest health care facility.

### Prevention is better than Cure –*Stay away from triggers*

- Don't smoke, and stay away from people who do. Cigarette smoke irritates the airways.
- Don't huddle around a fireplace or wood-burning stove.
- In cold weather, wrap a scarf around your nose and mouth to help warm frigid air before you inhale it.
- Be alert for unusual asthma triggers, such as strong-scented foods or the intensely perfumed sample strips bound into magazines, and do what you can to avoid them.
- Try eating smaller, more frequent meals, and don't eat before you go to bed. The upward migration of stomach acids that cause heartburn can also trigger asthma attacks.

## 14. Poisoning

**Poison** is any substance that causes injury, illness or death if it enters the body. Poisoning occurs when a toxic substance is swallowed, inhaled, or comes in contact with the skin, eyes, or mucous membranes, such as those of the mouth or nose.

Possible Sources of Poisoning	Symptoms
<p>➤ <b>Poisoning through Foods</b> such as certain types of:</p> <ul style="list-style-type: none"> <li>• Mushrooms</li> <li>• Shellfish</li> </ul>  <p>➤ <b>Poisoning through Drugs and medications</b> of high quantity such as</p> <ul style="list-style-type: none"> <li>• Sleeping pills</li> <li>• Tranquilizers</li> <li>• Alcohol</li> <li>• Aspirin</li> <li>• Cosmetics</li> </ul>  <p>➤ <b>Poisoning through Household items</b> such as</p> <ul style="list-style-type: none"> <li>• Cleaning products</li> <li>• Pesticides</li> <li>• Batteries</li> </ul>  <p>➤ <b>Poisoning through touching</b> (Absorbed Poisons) such as</p> <ul style="list-style-type: none"> <li>• Certain plants such as Poison Ivy, Poison Oak, Poison Sumac and Black Henna.</li> <li>• Certain frogs and animals.</li> </ul>  <p>➤ <b>Poisoning through inhalation</b> of toxic fumes such as</p> <ul style="list-style-type: none"> <li>• Certain carbon monoxide from an engine or car exhaust</li> <li>• Strong paints and Glues</li> <li>• High content of chlorine in water</li> <li>• Drugs (crack cocaine)</li> </ul>  <p>➤ <b>Poisoning through bites and stings</b> of venomous creatures like</p> <ul style="list-style-type: none"> <li>• Insects like wasps, honeybee, fire ants, spiders, ticks, jelly fish and other marine creature</li> </ul>  <p>➤ <b>Poisoning through injection</b> of drugs or medications injected with a hypodermic needle</p> 	<p>➤ <b>Neurologic</b></p> <ul style="list-style-type: none"> <li>• Changes in consciousness</li> <li>• Irregular pupil size</li> <li>• Seizures</li> <li>• Headache</li> <li>• Dizziness</li> <li>• Seizure</li> </ul> <p>➤ <b>Cardiovascular/Respiratory</b></p> <ul style="list-style-type: none"> <li>• Chest or abdominal pain</li> <li>• Difficulty of breathing</li> <li>• Weakness</li> <li>• Uncontrollably restless and agitated</li> </ul> <p>➤ <b>Gastrointestinal</b></p> <ul style="list-style-type: none"> <li>• Nausea and vomiting</li> <li>• Diarrhea</li> </ul> <p>➤ <b>Others</b></p> <ul style="list-style-type: none"> <li>• Sweating</li> <li>• Burning /teary eyes/ blindness</li> <li>• Abnormal skin color</li> <li>• Burns around the lips, tongue or on the skin</li> </ul>



## How to Manage?

### If you suspect a person is poisoned, do the following

1. Check for scene safety and look out for the possible source of poisoning. Look out for odors, pills, venomous creature, any food items and drugs. This will help in administering the treatment more efficiently.
2. Check the person's level of consciousness and breathing. If conscious ask them about the kind of poisoning source.
3. If the poison / drug were consumed by the victim ask him/her about the type of drug, the quantity consumed and the time when it was consumed.
4. If the ingested poison is unknown and the person vomits, save some for analysis.
5. If the suspected poison is a household cleaner / medicine, read the container's label and follow instructions for accidental poisoning.
6. Have somebody gather all the pill bottles / containers with labels, and any other information about the poison to send along with the ambulance team
7. In case of poisoning through inhalation, do **not** try to rescue an unconscious person, where a highly toxic or unknown gas is involved, without a breathing apparatus / covering your nose and mouth. You may become a victim yourself. Avoid breathing the fumes.
8. If the victim is restless and gasping for breath then move him/her into fresh air as soon as possible. Try to calm the person and loosen any tight clothing around the neck.
9. Begin CPR if the person shows no signs of breathing.
10. In case of poisoning by touch, carefully remove contaminate clothing of the victim and wash the exposed areas with copious amounts of room temperature water.
11. Call the National Poison Control Center -Oman Hotline:
  - 142- Consultation on Management of Poisoning**
  - 21- Information Request from Authorities**
12. Follow the directions of the Poison Control Center.

### **Note:**

- *The small, flat batteries used in watches and other electronic devices are dangerous to young children. A battery stuck in the esophagus can cause severe burns in as little as 2 hours. If you suspect that a child has swallowed a battery, immediately take him or her for an emergency X-ray to determine its location and to get it expelled from the body.*
- *Don't give syrup/tea of ipecac to induce vomiting as it can do more harm than good.*

## 15. Drowning

**Drowning** is a process resulting in primary respiratory impairment due to submersion/immersion in a liquid medium. A liquid interface is present at the entrance of the victim's airway, preventing the victim from breathing.



### How to Manage?

1. **DO NOT** attempt to rescue a drowning person if you do not know how to swim or if the waters are strong and rough. Just call 9999 for help instead.
2. Alert someone else on the shore if you are swimming out to rescue the victim. Have them call 9999
3. Do not attempt a swimming rescue without a rescue buoy on hand; a drowning victim's first reaction will be to climb on top of you, so you'll need a flotation device to keep both of you safe and perform the rescue effectively.
4. If you are skillful in swimming, do the following:



- Approach the person from behind and grab him/her with one hand (*wrap your one arm under his armpit from behind in way that the victims head is above the water and rests over your shoulder*). If you have a rescue buoy instruct the victim to grab the buoy.
- Use your other hand to swim. Use the freestyle stroke.
- If you have special training, you can start rescue breathing while the victim is still in the water providing that it does not delay removing the victim from the water.
- Once out of the water, assess the victim's alertness and consciousness. Start CPR if victim becomes unconscious
- If alone, give 5 cycles of CPR (2 min), compressions and ventilations before activating emergency number 9999.
- Keep the person warm by removing wet clothing. Cover with warm blankets to prevent hypothermia.
- Stay with the person until professional help arrives.



5. If you're unable to reach the victim then, use a rope/ a long stick/ rod to pull the victim out from water.
6. If the victim fails to grab onto the rope, tie it around your waist and then head out to the victim with a rescue buoy. But remember to tie the rope to a firm surface/object and then proceed towards the victim.
7. Keep checking breathing, pulse and level of response until help arrives.

## 16. FRACTURE AND SPRAINS

**Fracture** refers to complete break or partial cracking of the bone due to falls, blow of an accident and forced twisting movement of limbs.

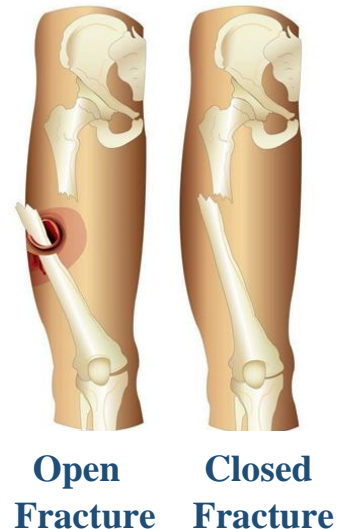
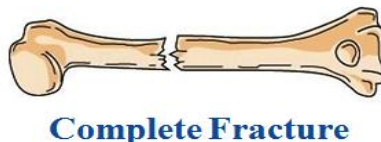
**Sprains** refer to internal tear of tissue (*ligaments*) that connect bones at a joint due to fall, twisting, or experiencing trauma to the joint.

**Strain** is usually caused as the result of overstretching or overuse of muscles and tendons (*tissue attaching a muscle to a bone*)

Signs and Symptoms		
Fracture	Sprain	Strain
<ul style="list-style-type: none"> <li>• Swelling or bruising over a bone</li> <li>• Deformity of an arm or leg</li> <li>• Pain in the injured area that gets worse with movement or when pressure is applied.</li> <li>• Bone grating.</li> <li>• Loss of function in the injured area.</li> <li>• Bone protruding from the skin</li> </ul>	<ul style="list-style-type: none"> <li>• Pain.</li> <li>• Swelling.</li> <li>• Bruising and swelling.</li> <li>• Difficulty of movement.</li> <li>• Coldness, numbness and tingling sensation in the injured area.</li> <li>• Feeling/hearing a “pop” in the joint at the time of injury.</li> </ul>	<ul style="list-style-type: none"> <li>• Sudden onset of pain</li> <li>• Stiffness</li> <li>• Soreness</li> <li>• Limited range of movement</li> <li>• bruising or discoloration</li> <li>• swelling</li> <li>• muscle spasms</li> </ul>

### Types of Fractures

- **Complete/Comminuted Fracture** -the bone snaps into two or more parts.
- **Incomplete/ Greenstick Fracture** - the bone cracks but does not break all the way through
- **Open/Compound Fracture** – the bone breaks through the skin bleeding it.
- **Closed/Simple Fracture** - the bone breaks/cracks but there is no open wound in the skin

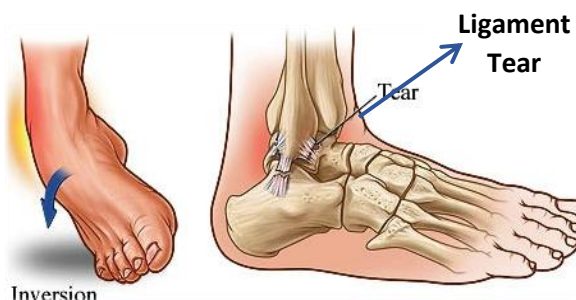


## FRACTURES

1. Assess the person's general condition including responsiveness and airway.
2. Calm the person. If the injury involves the head, neck or spine calls 9999 immediately.
3. If there is any bleeding, then contain it by applying pressure to the wound with a sterile bandage or a clean cloth.
4. Do not move or try to straighten the injured extremity to prevent further injury.
5. Immobilize the injured area by using splint or sling, limiting the pain and swelling.
6. Wrap ice pack (ice cubes in a piece of cloth) and apply it to the injured area for at least 10 minutes at a time.
7. If an injured extremity becomes blue (cyanotic) or extremely pale, call 9999.
8. Facilitate safe and prompt transport.

## SPRAINS AND STRAINS

1. Think P.R.I.C.E. for the first 48 hours after the injury.
2. **Protect:** Protect the injury from further damage using a sling or splint.
3. **Rest:** Rest and do not move the injured part until it's less painful.
4. **Ice:** Wrap an icepack or cold compress in a towel and place over the injured part immediately. Continue for no more than 20 minutes at a time, four to eight times a day.
5. **Compression:** Support the injured part with an elastic compression bandage for at least 2 days to help limit swelling and movement. However, it's recommended to take off your bandage when you sleep.
6. **Elevation:** Raise the injured part above heart level to decrease swelling.
7. Administer ibuprofen or acetaminophen for pain and swelling, provided that the patient is not allergic to it or has any contraindications with other medicines. *However it is recommended to consult a doctor for pain killers.*
8. Contact 9999 if:



- You're unable to bear weight on the injured limb, the joint(s) feels unstable or numb, or you can't move the limb. This might mean that a ligament might have completely torn off.
- You witness any redness, red or cyanotic streaks that spread out from the injured area.
- You experience pain directly over the bones of an injured joint.



**Remember** that inadequate or delayed treatment might contribute to long-term joint instability and chronic pain.

## Image Courtesy and References:

- AHA and American Red Cross ( 2015). *First –Aid Guidelines Update 4<sup>th</sup> Edition*. Retrieved from <https://eccguidelines.heart.org>
- American Red Cross First-aid/CPR/AED. Participants Manual ( 2014). Retrieved from <http://www.redcross.org>
- Poison Control Center, Directorate General of Health Affairs 2012). *Department of Environmental and Occupational Health*. Retrieved from <http://www.deohoman.org/>
- Food Poisoning in Oman (Sept.2015). Retrieved from <https://www.y-oman.com/2015/09/food-poisoning-in-oman>
- Mayo Clinic (2017). *Severe Bleeding: First Aid*. Retrieved from <https://www.mayoclinic.org/>
- First Aid Guide. Royal Oman Police Ambulance Division
- First Aid Information for Fainting (Nov. 2017). *Understanding Fainting – the basics*. Retrieved from <https://www.webmed.com>
- Image Courtesy: <http://clipartmag.com>  
<https://clipart-library.com>  
<https://www.shutterstock.com/>  
<https://www.pinterest.com/>  
[https://www.nhs.uk/conditions/first-aid/recovery-position /](https://www.nhs.uk/conditions/first-aid/recovery-position/)  
<http://mewat.haryanapolice.gov.in/template/emergency.html>





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