Prakrit Mittal presents:

FIRST AID CRASH COURSE

Use this booklet as reference material for all that you learnt! Keep refreshing your skills and continue to review key concepts!

Photos

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Intro to First Aid

Module 1

What is first aid? What are its aims?

First aid is an immediate care given to a person who has been injured, or has suddenly become ill, prior to the arrival of qualified medical assistance

What are the Aims of First Aid?
Prolong Life
Administer immediate and effective first aid in order to save someone's life by maintaining the airway, breathing and circulation and be prepared to carry out life-saving emergency first aid.

Prevent Further Injuries
First aid measures must be performed in such a way as to avoid causing additional injuries through improper handling or incorrect technique. Only give First Aid treatment in accordance withyour training.

Promote Recovery
This means to looking out for the victim's physical comfort as much as possible. This also involves reassuring the victim as a means of psychological support.

First Aid Container and recommended content?

The contents of a First Aid container will be determined from assessment of First Aid needs.

- Keep clean and free from dust
- Make accessible, reachable & locate near to hand washing facilities
- Examine regularly and restock after use
- Discard out-of-date items

Contents to include

- Conforming Bandage
- Triangular Bandage with Pin
- Foil Bandage
- Burn Dressing
- Wound Dressing- Finger, Medium , Large
- Plaster
- Nitrile Gloves
- Resuscitation Face Shield
- Eye Wash (250ml)
- Eye Pads
- Adhesive Tape
- Scissor
- Content List

01 Arrival on the scene

- Always ensure that it is safe for you to approach a casualty before attempting to carry out any treatment.
- Your safety comes first, so do not put yourself in any danger.
- Ask what happened, if anyone saw the incident or if there are any other trained personnel available.
- Do not allow yourself to become isolated when dealing with emergency situations.
- Take control and obtain assistance from those around you, as their help may be required with the casualty or in sending them for a First Aid box and calling the Emergency Services.
- You may be dealing with multiple casualties, so assistance is vital.

02 Dealing with casualties and prioritizing the treatment

First Aid should be applied to the following life threatening conditions in the following order of priority.

- Casualty is unconscious
- Casualty is not breathing
- Severe bleeding
- Burn or bone injury

Possible Hazards in dealing with emergency:

- Traffic
- Electricity
- Water
- Buildings
- Fire
- Chemicals
- Smoke & Gas
- Bystanders

Contacting Emergency Services

- First aiders will contact the emergency services themselves or instruct a bystander to do so.
- This can be achieved by remembering the acronym LIONE.

L Location

I Incident

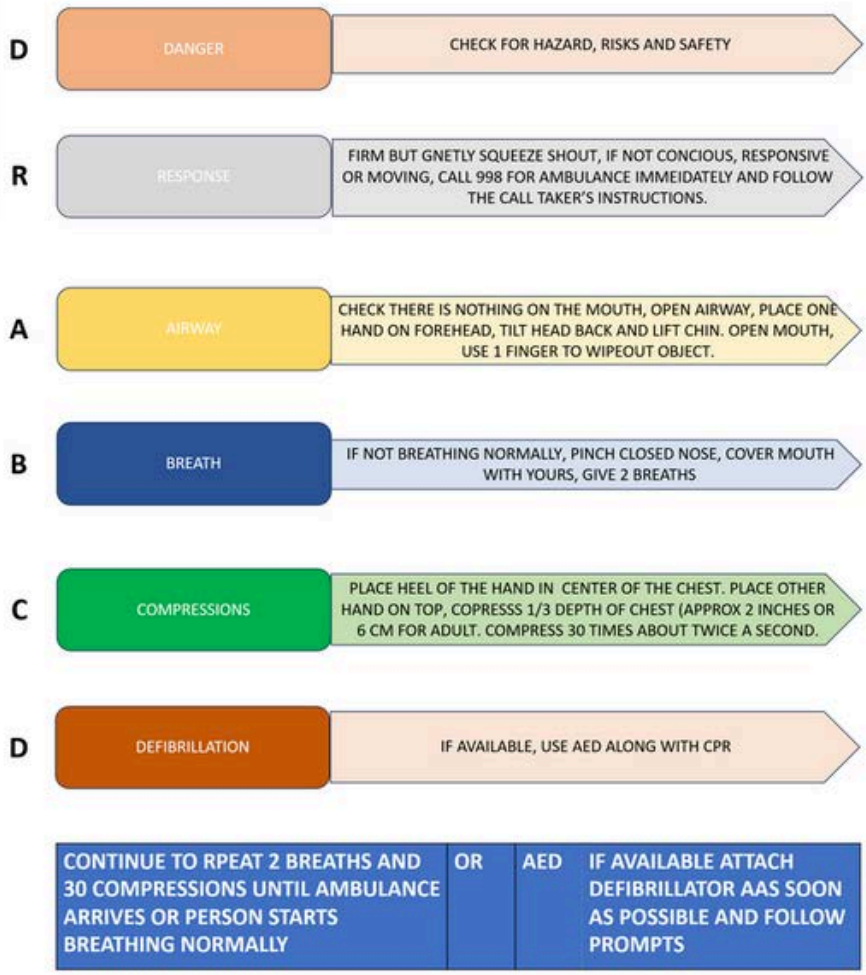
O Other Service

N Number of casualty

E Extent of injury

Assessing the Incident

Module 2



The Primary Survey

- Having asssessed the sourrounding area for any dangers and ensured that it is safe to approach the casualty you should now carry out a primary survey to indenty any life-threating conditions of the casualty
- You should remember that life-threatening must take priority over any other First Aid Treatment

The DRABCD Action Plan

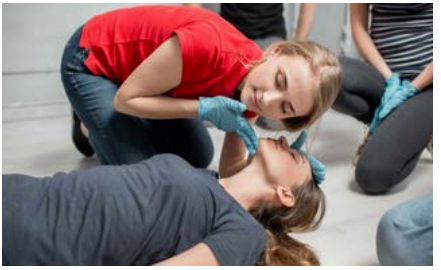
- The DRABCD action plan will assist you to determine the priorities of your first aid care in any life threatening situation
- The DRABCD action plan will also assist you in assessing for the presence of absence of consciousness and breathing and will enable you to determine the type of Bais Life Support measures reauired to preserve and / or retstore life.

Danger

PRIOR TO APPROACHING THE CASUALTY, ENSURE THE SCENE IS SAFE TO DO SO.

Response

- Approach the casualty from their side of their feet
- Talk to the casualty as you approach to see if alert.
- Kneel down by their side and put disposable gloves
- Gently tap the shoulder and ask “CAN YOU HEAR ME, OPEN YOUR EYES”

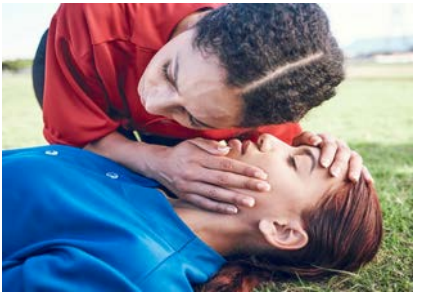


Airway

- Head – tilt / chin life
- One hand on the forehead, two fingers on the chin
- Open the mouth, look for any obstruction and then tilt the head up to open the airways.

Breathing

- Look, listen and feel for breathing
- Look for any movement of the chest
- Listen for any air coming our from mouth or nose
- It is important to undetstand that in Cardiac Arrest victims, Agornal gaps (infrequent & irregular breathing) are present.



Circulation/CPR

- Casualty not breathing – commence CPR
- 30 Chest Compressions
- 2 Rescue breaths
- Check for circulation, do head to toe survey

Defibrillation

If available, automated external defibrillator (AED) should be used alongside CPR.

Secondary Survey (Head to toe survey)

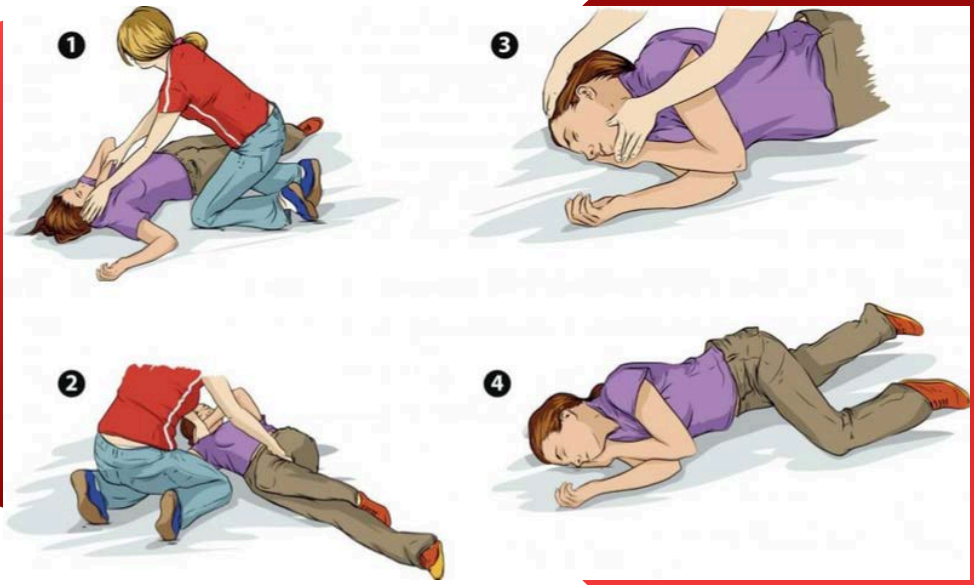
If the casualty is breathing, a secondary survey should be carried out. Inform the casualty what you are doing at all stages. If the casualty is responsive, ask them to tell you if they feel any pain during the head to toe survey.

- Head and face
- Neck
- Chest and Shoulders
- Arms and Hands
- Spine
- Pelvis
- Abdomen
- Legs and Feet

Recovery position

After conducting the primary and secondary survey, the casualty who is breathing normally, having no injury, immediately place the casualty into a recovery position, this will help casualty to:

- Maintain the airway open
- It also helps excretion, such as vomit, to drain from the mouth
- This will improve breathing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Secondary Survey
Start

Managing an Unresponsive and Non Breathing Casualty

Module 3

Basic life support (BLS) comprises of the following elements:

- **Initial Assessment (Primary Survey)**
- **Airway maintenance**
- **Chest Compressions**
- **Rescue bretahing (expired air ventilation)**

The Principles of Resuscitation

Cardiopulmonary Resuscitation (CPR)

CPR is a amthod of combing chest compressions with effective rescue brreaths in order to airtificially circulate blood and to put air into the lungs

Cardio= Heart Pulmonary = Lungs Resuscitation = Revive

- Kneel beside the casualty, place the heels of one hand in the center of casualty's chest.
- Place the heel o your other hand on top of first hand, interlock the fingers of your hands
- Position youself vertically above the casualty's chest and with your arms straight, press down 5-6 cms.
- After each compression, release all of the pressure on the chest without losing contact between your hands and sternum. Repeat at the rate of 100-120 compressions per minute
- Adminster 2 effective rescue breaths.

Chest Compressions

Rescue Breaths

Adult Basic Life support

Check for Danger

Check for Response AVPU → If Responsive, Treat injuries, call the Emergency Services if needed

Shout for Help

Open Airway → Head Tilt and Chin Left

Check for Normal Breakthing for no more than 10 Seconds → YES → If Breathing normally, check for injuries, place in the recovery position, call the emergency services and monitor

NO

If help is available send AID to call the Ermergency Service and see if AED is Available → If no help is available then you must call the emergency services yourself and see if an AED is available

✖ 30

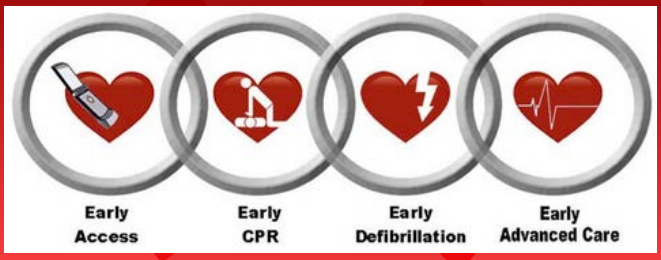
Start with 30 Chest Compressions

Give 2 Effective Rescue Breaths

Continue with CPR 30:2 until the Emergency Services take over, you are exhausted or casualty recovers

LIFEGUARDS: Drowning: Give 5 initial breaths and resusicate for 1 minute and then call emergency

Action	Infant	Child
THIRTY CHEST COMPRESSION	TWO FINGERS: • Place two finger vertically on the lower half of the breastbone (sternum) • Compress atleast one third of the chest's depth • Repeat 30 times.	ONE (OR TWO) HANDS : • Place the heel of the hand on the lower half of the breastbone (sternum) • Compress atleast one third of the chest's depth • Repeat 30 times.
THE COMPRESSION RATE FOR INFANTS AND CHILDREN IS 100-120 COMPRESSION PER MINUTE FOLLOWED BY:		
TWO RESCUE BREATHS	MOUTH TO MOUTH &NOSE: Take a breath • Ensure that you form a good seal • Blow steadily into the infant's mouth/ nose over 1-1.5 seconds ensuring the rise and fall of the chest • Repeat again	MOUTH TO MOUTH : • Pinch the soft part of the child's nose closed • Take a breath • Ensure that you form a good seal • Blow steadily into the child's mouth over 1 - 1.5 seconds ensuring the rise and fall of the chest • Repeat again
REPEAT AT A RATIO OF 30 COMPRESSIONS AND 2 BREATHS, (30:2) CONTINUE UNTIL:	• Qualified medical assistance takes over • The infant shows sign of regaining consciousness like coughing, opening their eyes or starting to breathe normally • You become physically exhausted and cannot continue	• Qualified medical assistance takes over • The child shows sign of regaining consciousness like coughing, opening their eyes, talking and moving or breathe normally • You become physically exhausted and cannot continue
FOR BOTH INFANTS AND CHILDREN, IF YOU HAVE DIFFICULTY ACHIEVING AN EFFECTIVE RESCUE BREATH, THEN THE AIRWAY MAY BE OBSTRUCTED. • Open the infant's or child's mouth and check for any visible obstructions (do not perform a blind finger sweep). • Ensure that there is adequate head-tilt-chin but also ensure that the neck is not over extended. • Do not make more than 2 attempts to achieve effective breathe. Revert back to chest compressions.		



The Survival Chain

1) Early Access to Care

Quick contact with emergency care is essential. Call 998 (in most communities) or your local emergency number immediately.

2) Early CPR

Learning CPR is the greatest gift you can give your family and friends. If performed properly CPR can help save a life until emergency medical help arrives

3) Early Defibrillation

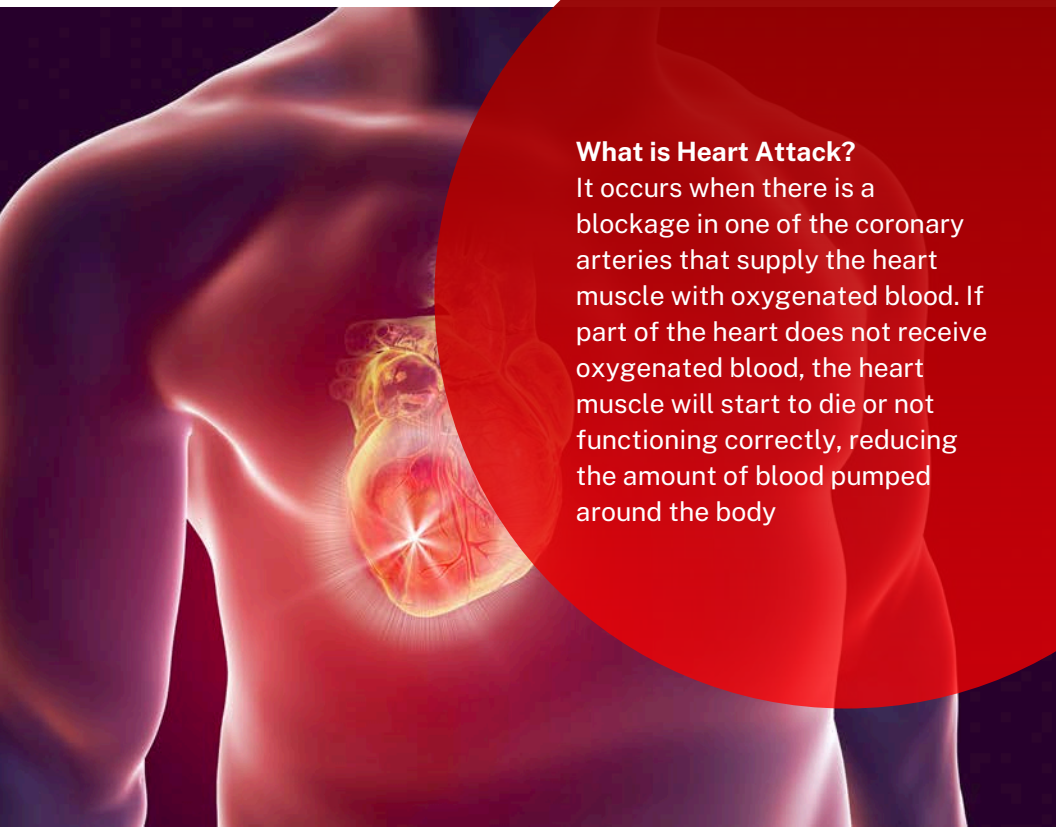
In most adults, sudden cardiac death is related to ventricular fibrillation. Quick defibrillation (delivery of an electrical shock) is necessary to return the heart rhythm to a normal heartbeat.

4) Early Advanced Care

After successful defibrillation, most patients require hospital care to treat and prevent future events.

Managing Heart Attack

Module 4



What is Heart Attack?
It occurs when there is a blockage in one of the coronary arteries that supply the heart muscle with oxygenated blood. If part of the heart does not receive oxygenated blood, the heart muscle will start to die or not functioning correctly, reducing the amount of blood pumped around the body

Recognition

- Central chestpain radiating between abdomen and jaw and possibly down to one arm.
- A crushing, restricting feeling on and around the chest.
- Rapid breathing and shortness of breaths.
- Pale, cold and clammy skin with a blue/grey appearance.
- Nausea and vomiting.

Management

The objective when treating a casualty for a suspected heart attack is to rest the heart and reduce the pressure placed on it.

- Assist the casualty to rest in a comfortable position
- A half-sitting position with support for head, back and under the knees
- Call 998 for ambulance
- Monitor the casualty's airway and breathing
- Loosen any tight restricting clothing
- Calm and reassure
- If the casualty become unresponsive carry out your Basic Life Support.


First Aid Steps You Should Take In Case Of A Heart Attack
Call Emergency
Check Vital Sighs
Lift Chin Check Breathing
Give Rescue Breaths
Perform CPR
Wait For Help

Managing an Obstructed Airway

Module 5

What is an obstructed airway?

An obstructed airway is the partial or complete blockage of the upper airway which leads to the lungs.

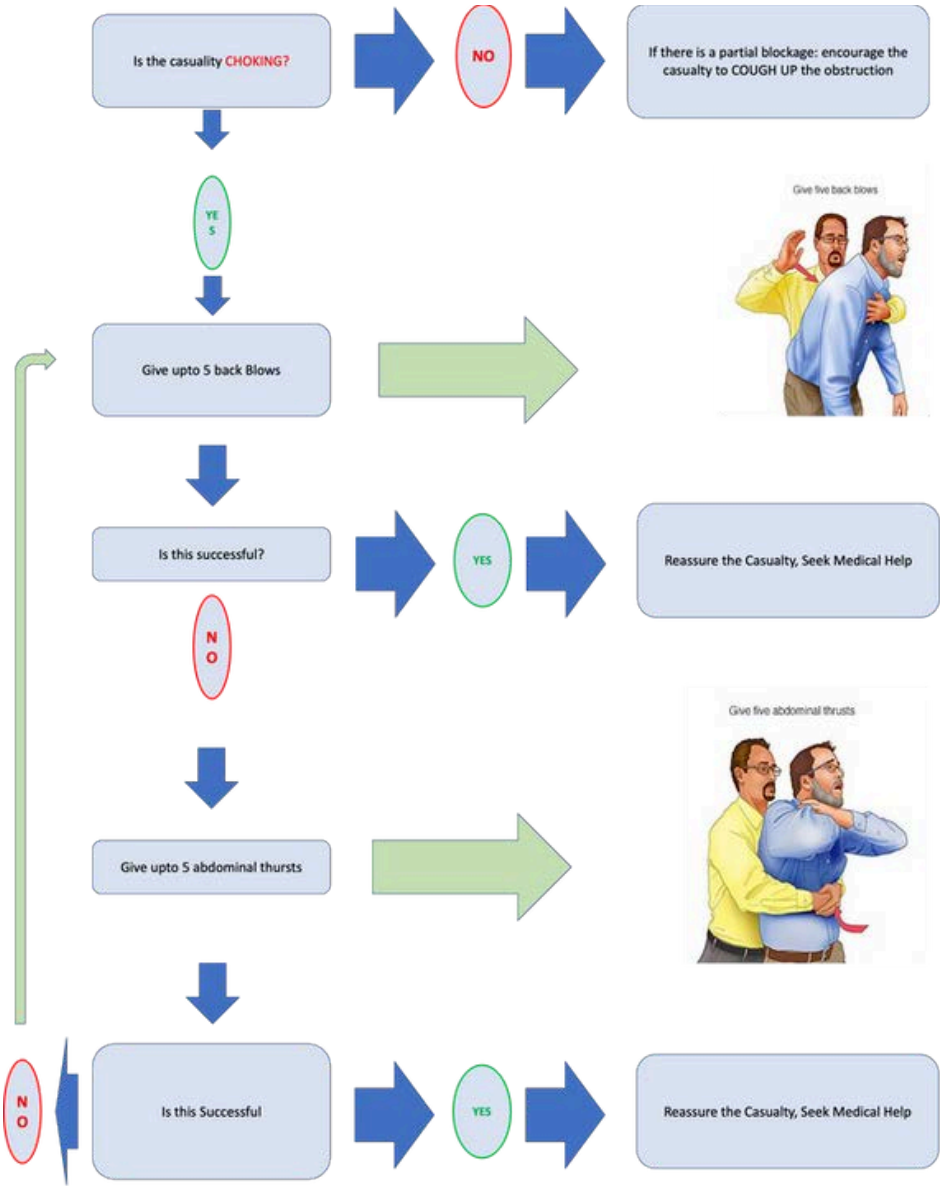
What is choking?

A foreign object that become stuck in the throat or windpipe may cause a partial or complete blockage.

Recognition

- Grasping at the throat area
- Look panic, anxiety and distress
- Difficulty in speaking and breathing
- Weakness
- Becoming unresponsive

Dealing with Choking (Adult / Child)



Dealing Infant Choking

Look in the mouth and remove any visible easily removable object

YES

Give upto 5 back Blows

Is this successful?

YES

Reassure the Casualty, Seek Medical Help

NO

Give upto 5 abdominal thursts

NO

Is this Successful

YES

Reassure the Casualty, Seek Medical Help

Managing Wounds and Bleeding

Module 6

What is a Wound?

A wound is a break or damage in the continuity of the skin, either internal or external. There are two types of Wounds

Managing a Wound

Internal Bleeding (Closed Wounds)

It is caused by damaged capillaries bleeding under the skin. It will often be caused by a trauma to the part of the body, often caused by a blow or fall. Usually visible, appearing as a blue/purple or purple/ black coloration. It can also be caused by fracture that have punctured blood vessels, muscles, tissues or organs.

Managing Internal Wounds

- **R**EST the injured part
- **I**CE application
- **C**OMPRESSION on the injured part
- **E**LEVATE the injured part

Closed Fracture

Disruption in the continuity of the bone.

- Pain & Inability to move
- Tenderness & Swelling
- Discoloration
- Deformity
- Irregularity and abnormal appearance

Managing Fractures

- Wear gloves
- Support the injury (immobilize)
- Apply spints
- Apply cold compress
- Do not try to straighten or repair the fracture part.

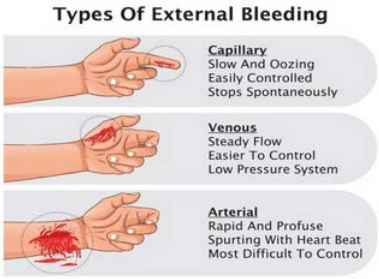
Managing a Wound Cont.

External Wound

- This is where blood escapes from the circulatory system to the outside of the body, for example from a wound.
- It can be caused by clean cut from sharp edges, a round tear or crush, a graze or superficial wound from rough surface or an object entering the body.

3 types of External wounds

- **Capillary Bleeding:** This is a bleed that is red in color and slowly oozes from the wound or from underneath the skin, e.g. bruising.
- **Venous Bleeding**: This is a bleed from a vein, the blood will be a dark red in color (deoxygenated blood) and will gush or flow from the wound
- **Arterial Bleeding**: This is a bleed from an artery and will be bright red in color (oxygenated blood); the blood will pump in sync with casualty's heartbeat.



Major Bleeding

- Major wounds are life-threatening due to severe blood-loss; if they are left untreated, they may lead to hypovolemic shock and high risk of infection and other complications.

Management:

- Wear disposable gloves
- Lay the casualty down on the floor to help prevent shock
- Examine the injury to establish the extend of the wound
- Elevate the injured part if injuries allow
- Apply direct pressure over the wound to control blood loss
- Apply a sterile dressing on the wound, secure with bandage
- Call 998 for an ambulance and monitor the casualty's condition

Minor Bleeding

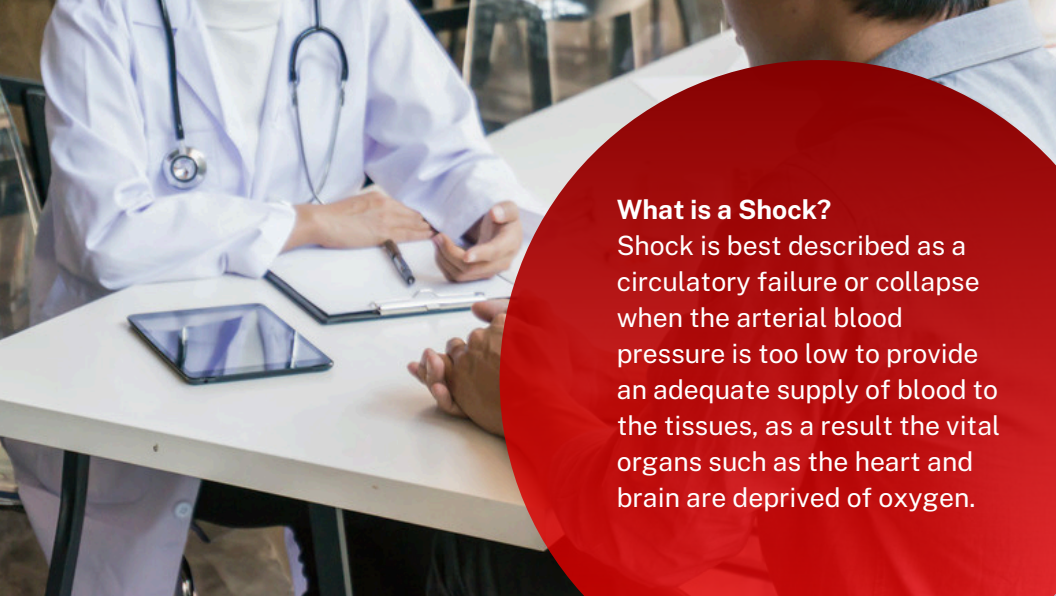
- Minor wounds are not life-threatening conditions; however, if left untreated, they may lead to infection and other complications.

Management:

- Wear disposable gloves
- Examine the injury to establish the extent of the wound
- Clean the wound under fresh running water
- Sit the casualty down, if they feel weak and unsteady, position them on the floor
- Elevate the injured part if injuries allow
- Apply a sterile dressing or plaster on the wound

Managing Shock

Module 7



What is a Shock?
Shock is best described as a circulatory failure or collapse when the arterial blood pressure is too low to provide an adequate supply of blood to the tissues, as a result the vital organs such as the heart and brain are deprived of oxygen.

Managing a Shock

Shock can be caused by:

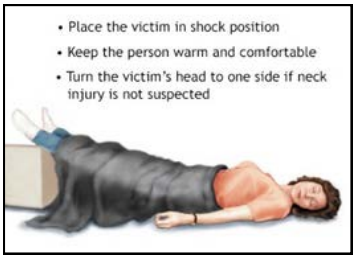
- A severe loss of blood from internal and external bleeding
- Loss of bodily fluid due to burn
- Excessive vomiting and diarrhea
- A reduced blood supply or activity of the heart
- Widespread dilation of the veins with insufficient blood to fill them caused by bacteria or chemical toxins
- Injury to the spinal cord
- Severe head trauma damaging the nerves controlling circulation

Management of Shocks

- Manage the cause (bleeding, burn, or injuries)
- If injuries allow, lay the casualty down and raise the legs
- Loosen tight clothing
- Keep the casualty warm with blankets or coat
- Call 998 for ambulance, Calm and Reassure
- Monitor the casualty's airway and breathing
- Do not let them have anything to eat, drink or smoke.

Recognition of Shock

- Obvious injury
- Pale, blue/grey, cold and clammy skin
- Rapid but weak pulse
  Weak and confused
  Nausea and thirst
- Rapid shallow breathing



Managing Burns and Scald

Module 8

Types of Burns

Dry Burns

- Hot Surface
- Fire
- Friction

Scalds

- Hot liquid
- Hot fat or Oil
- Steam

Radiation

- Sunburn
- Ultraviolet lamps
- Overexposure to X-ray

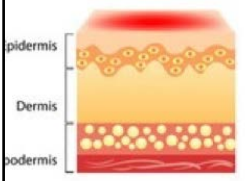
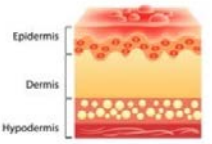
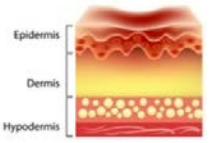
Chemical Burns

- Acids & Alkalis
- Domestic cleaning products
- Industrial Chemicals

Electrical Burns

- Domestic Low Voltage
- High Voltage
- Lightning
- Cable

Degrees of Burns

Superficial burn (1st degree burn) • Only the outermost layer of the skin is affected • Redness swelling and tenderness • 5% or more must sent to hospital	 First-degree Burn
Partial thickness burn (2nd degree burn) • Rawness and blister • 1% must send to hospital • 9% or more will cause shock	 Second-degree Burn
Full thickness burn (3rd degree burn) • The two layers of the skin are burnt • Required hospital treatment	 Third-degree Burn

First Aid for Burns

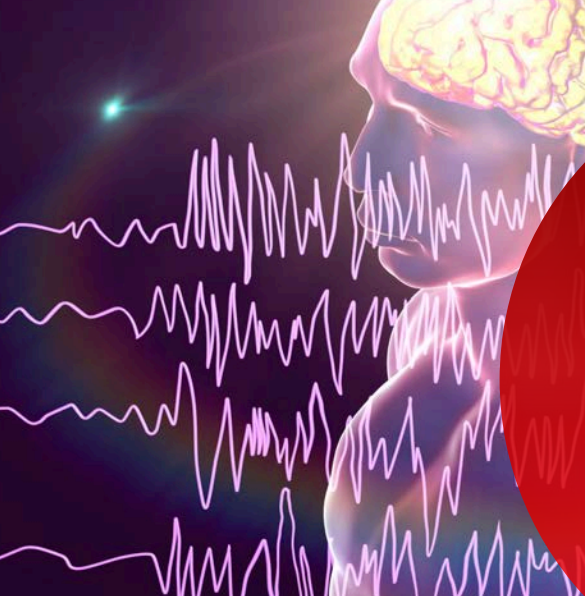
Superficial burn (1st degree burn)
Place on your disposable gloves
Immerse in tepid running water for a minimum of 10-20 minutes
Do not remove anything that is stuck to the burnt skin
Place a dry sterile dressing or cling film around the injury

Partial thickness burn (2nd degree burn)
Put on your disposable gloves
Remove clothing and then flush the wound area with tepid water for a minimum of 10-20 minutes
Do not burst any blisters that may have formed
Place a dry sterile dressing or apply cling film around the injury.

Full thickness burn (3rd degree burn)
Remove the source of the burn if possible
Put on your disposable gloves
Remove clothing and then flush the area of the wound with tepid water for a minimum of 10-20 minutes
Remove restrictive clothing or jewelry in case of swelling, however, do not remove anything that is stuck to the burnt skin
Place a dry sterile dressing or apply cling film around the injury
Seek medical attention immediately.

Managing Epilepsy

Module 9



What is Epilepsy?
It is a brain disorder that cause people to have recurring seizure. It is commonly known as epilepsy caused by a sudden burst of excessive, electrical activity in the brain causing a temporary disruption to signals passing between brain cells.

Managing Epilepsy

Epilepsy can be caused by:

- From birth illnesses (lack of oxygen, hemorrhages and infection of the brain)
- Genetic disorders
- Abnormal brain development in the womb
- Meningitis
- Febrile seizures.
- Stroke or any other type of damage to the brain

What to do when a seizure?

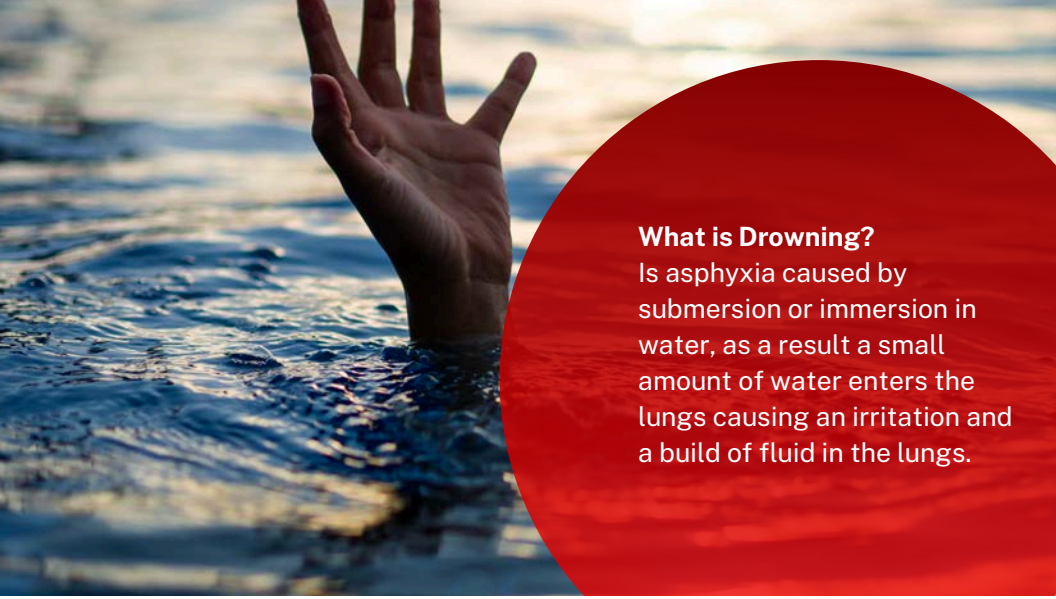
- Make the area safe, remove any hazards
- Do not restrain the casualty
- Loosen any restrictive clothing
- Do not put anything in the mouth
- Place padding under their head
- Record the duration of seizure
- Call 998 if seizure is more than 4 mins.
- Place the casualty into recovery position once the seizure stops

How a seizure starts

- A person experiencing seizure may cry out, (- or make some sound, staring blankly, stiffen the muscle then have a rhythmic move of the arms and legs.

Managing Drowning

Module 10



What is Drowning?
Is asphyxia caused by submersion or immersion in water, as a result a small amount of water enters the lungs causing an irritation and a build of fluid in the lungs.

Managing Drowning

Recognition of drowning

- The casualty may be face down in the water or completely submerge.
- Water flowing from the mouth when recovering
- Vomiting
- Coughing
- Unresponsive with no breathing

Don't Jump and Rescue even you know how to swim!!

Management

- Try reaching the casualty with a pole, rope or any object that can extend towards the casualty.
- Recover to land and clear the airway, allow the casualty to cough if they can.
- Do not force the water out as this will induce vomiting
- If your casualty stops breathing, call 998 then start CPR immediately
- If casualty is unresponsive but breathing, place in recovery position.

Managing Heat Emergency

Module 11

Effect of heat into the body
The body's thermostat that is located in the brain enables the body temperature to be monitored and to some extent controlled at a level of approximately 36.9 degrees. In hot conditions blood vessels dilate allowing excess heat to be lost through the skin (sweating) and by increasing our breathing rate.

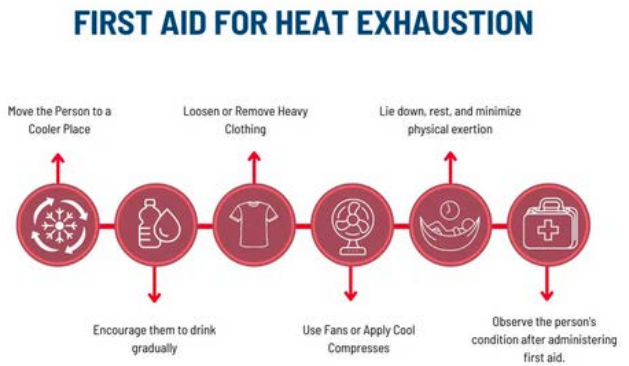
Heat exhaustion

What is it?

When the body temperature exceeds the atmospheric temperature, particularly in humid conditions, sweat will not evaporate from the body causing a loss of salt and water from the body.

Managing Heat Exhaustion

- Place in the shade or cool environment
- Remove outer and any restricting clothing
- Immediately lower down the temperature by all means
- Give plenty of water if responsive
- Lay down and elevate the legs



Heat Stroke
When there is a failure of the thermostat in the brain, the body's temperature will rise above 40 degrees. This may have been brought on by uncontrollable heat exhaustion, prolonged exposure to high temperature. If this is dealt with immediately, brain damage can occur.

Heat Stroke

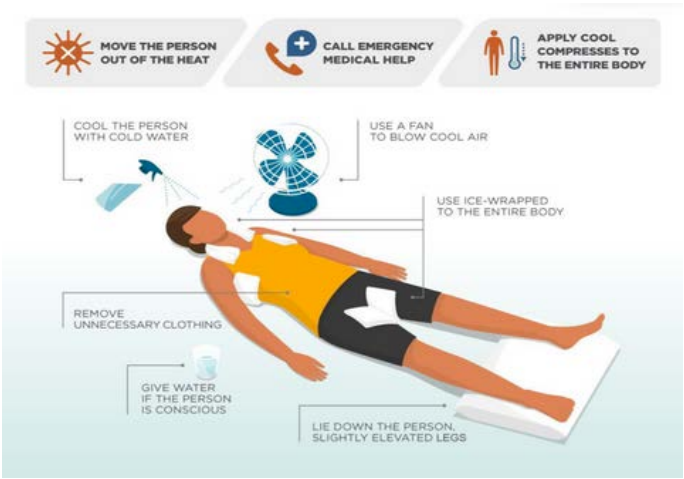
Managing heat stroke

- Call 998
- Place in the shade or cool environment
- Remove outer and any restricting clothing
- Immediately lower down the temperature by all means
- Be prepared to carry out basic life support (CPR)

Preventing Heat emergencies

- Drink enough amount of water Don't work or play under the sun
- Avoid creams and lotion, that will not allow sweating.

"Prevention is always better than cure"



List of Emergency Contacts

Emergency Numbers in Dubai

- **Ambulance: 998**
- **Police: 999**
- **Fire: 997**

Major Hospitals

- **Rashid Hospital**
- **Medcare Hospital**
- **Parkview Hospital**
- **Welcare Hospital**

Enter your family doctor name:

Enter your key emergency person to contact:

You have just learnt a lot of life saving skills!