

# Emergency Aid Course

## **What is First Aid?**

To use all the available human and material resources at the site of accident to provide initial care to a victim of injury or sudden illness until more advanced care can be provided.

## **Principles of First Aid:**

- to preserve life
- to prevent condition worsening
- to promote recovery

## **Emergency Action Plan**

### Primary Survey

#### *DRABC*

- **D**anger            assess the situation, remove danger from casualty or casualty from danger if necessary
- **R**esponse        check the level of consciousness
- **A**irway            check and maintain an open airway
- **B**reathing        check and maintain breathing
- **C**irculation        check and maintain adequate circulation

### Secondary Survey

- question the victim and bystanders
- check vital signs
- do a head-to-toe examination

## **A diagnosis is made on the basis of :**

- History            how the accident occurred
- Signs              details ascertained by the first aider using senses such as sight, touch, hearing and smell
- Symptoms        how the casualty feels

## Establish priority in treatment and appropriate disposal of casualty

- hand over to qualified first aider
- hand over to ambulance personnel
- hand over to medical personnel

**\*CASUALTY WHO HAS BEEN UNCONSCIOUS OR ASPHYXIATED MUST BE SENT TO HOSPITAL\***

Care of properties: hand over to Police or Medical personnel

Emergency Call: 999

## **Unconsciousness**

Unconsciousness is the result of an interference with the functions of the brain. Any change in the state of the casualty's consciousness indicates that there is an interruption of the normal activity of the brain which can be dangerous. There are many causes of unconsciousness, the most common of which are: fainting, head injury, epilepsy, stroke, poisoning, diabetes and conditions associated with lack of oxygen.

### Level of Consciousness

<u>A</u> lert & Oriented	Fully oriented to Time and Place, able to answer questions
<u>V</u> erbal	Not fully oriented, however, able to obey simple verbal command
<u>P</u> ainful	Only response to Touch or Painful stimulant
<u>U</u> nconscious	Does not response to any touched or shouted command

**AIM:** To protect the unconscious casualty from danger, care for airway, breathing and circulation. Arrange ambulance transport to hospital as soon as possible for accurate diagnosis and medical management.

### **Treatment**

- DRABC
- Body examination
- Recheck ABC
- If possible, place casualty into the Recovery Position
- Arrange for Transport to hospital
- Continue to monitor the casualty's ABC and conscious level at least once every minute

## Choking

Airway obstruction by foreign body which causes air not able to enter the lungs

### Signs & Symptoms

- sudden
- not able to speak
- not able to cough
- not able to breathe
- may be gripping his or her throat
- may collapse and become unconscious

### Treatment for Adult and Child

- encourage to cough
- abdominal thrust 5 times (once every second)
- examine mouth and remove any foreign body

### Treatment for Baby

- back slap 5 times (between the shoulder blades)
- chest thrust 5 times (one finger below the nipple line)
- examine mouth and remove any foreign body

### Treatment for Obese Victim or Pregnant Woman

- chest thrust 5 times
- examine mouth and remove any foreign body

## Bleeding

Types of wounds

- laceration a jagged cut or irregular tear of the skin, caused by contact with barbed wire, machinery or claws of animal.
- puncture a wound that results when the skin is pierced with a pointed object such as a nail
- abrasion an open wound in which the skin has been rubbed or scraped away (Graze)
- contusion a closed wound caused by force to body; also called a bruise
- incision an open wound caused by a knife, razor or sharp edge of paper, may bleed profusely

### Method to STOP BLEEDING

- Direct Pressure
- Elevation
- Indirect Pressure
  - brachial pressure point (upper arm)
  - femoral pressure point (groin)

***\*NEVER APPLY INDIRECT PRESSURE FOR MORE THAN 15 MINUTES\****

## HYPOVOLEMIC SHOCK

Shock caused by a reduced blood volume through the body.

- pale, cold, clammy skin

- rapid weak pulse
- rapid shallow breathing
- feeling thirsty, sick and may vomit
- possible unconsciousness

### **Treatment and shock prevention**

- DRABC
- lie the casualty down, rest and reassure
- maintain open airway (turn head to one side)
- stop any bleeding, raise both legs if possible
- maintain body temperature, *do not overheat*.
- comfort and observe vital signs, nothing by mouth
- send for help as soon as possible

### **Dressing and Bandages**

Dressing - protective and absorbent wrappings to placed on wounds in order to stop bleeding, prevent infection and absorb any leaking fluid

Bandages - to fix dressing on wound and assist in bleeding control

Average sites of Roller Bandages for use on an adult

<u>Part to be bandaged</u>	<u>Width</u>
Head	5 cm
Upper Limb	5 cm
Lower limb	7.5cm/ 10cm
Trunk	10cm/ 15cm

### **Wound with foreign body**

Foreign bodies, such as glass, metal or splinters, may be present in a wound.

- apply pressure at edges of wound
- apply ring pad or pack dressings around the site
- elevate injured part, send to hospital quickly

### **Internal Bleeding**

#### **Signs & Symptoms**

These will vary according to the amount and rate of blood loss

- history of sufficient injury to cause internal bleeding

- history of medical condition which may cause internal bleeding (e.g. ulcer)
- pain and tenderness around the affected area; swelling and tension may be felt
- possible signs & symptoms of SHOCK
- blood may appear from one of the body's orifices

### Forms of revealed internal bleeding and their source

Orifice	How revealed	Description	Possible cause
<b>Nose</b>	Profuse flow	Fresh (bright red) blood	Damage to nasal passages and possible fracture nose.
	Trickle	straw-coloured fluid (blood mixed with clear cerebro-spinal fluid)	Fractured skull
<b>Ear</b>	Steady bleeding	Fresh blood	Perforated eardrum
	Small trickle	Straw-coloured fluid	Fractured Skull
<b>Mouth</b>	Spat out (Sputum)	Small amounts of fresh blood	Jaw fracture
	Vomited	Dark-red-brown resembling coffee grounds	Injury to digestive tract, probably bleeding ulcer
	Coughed-up	Fresh blood Bright-red frothy blood	Upper airway injury Injury to lungs caused by rib fracture
<b>Rectum</b>	Steady bleeding	Fresh blood	Piles (haemorrhoids)
	Stool (faeces)	Black tarry consistency	Bleeding from upper intestine
<b>Urethra</b>	Urine	Blood-stained	Bleeding from kidneys or bladder
		Clotted or diluted blood	Injury to urinary tract or bladder (possibly the result of fractured pelvis)
<b>Vagina</b>	Gradual steady bleeding	May be fair to heavy or moderate flow with abdominal cramps	Severe menstrual bleeding
	Sudden flow	Severe loss, shock and possible history of pregnancy	Miscarriage or result of abortion

### Treatment for Internal Bleeding

DRABC → Treat for shock → Arrange transfer to hospital

### Burns & Scalds

A BURN is the damage to skin and other body tissue caused by contact with DRY HEAT. Burns may be caused by fire, flames, hot metal, electricity or chemicals.

A SCALD is damage which follows contact with WET HEAT, such as boiling water, steam, or hot oil.

## Degrees of Burns

### First Degree (Superficial)

- involves only the top layer of skin. The skin is red and dry, and the burn is usually painful. The area may swell. Most sunburns are first degree burn.

### Second Degree (Partial-Thickness)

- involves both the epidermis and the dermis. This injury is red and blisters may open and weep clear fluid, making the skin appear wet. These types of burns are usually painful, and the area often swells.

### Third Degree (Full-thickness)

- destroys both layers of skin, as well as or all of the underlying structures - fat, muscles, bones, blood vessels and nerves. These burns may look brown or charred with tissues underneath sometimes appearing white. They can be either extremely painful or relatively painless if the burn has destroyed nerve endings in the skin.

## Treatment for Burns & Scalds

### 3Bs & 3Cs

<i><b>B</b></i> urning Stopped	<i><b>C</b></i> ool
<i><b>B</b></i> reathing Maintained	<i><b>C</b></i> over
<i><b>B</b></i> ody Examined	<i><b>C</b></i> arry

### Don'ts

- apply ice directly to burns
- touch burns with anything except sterile or clean dressings;
- remove pieces of cloth that stick to a burnt area
- break blister or use any kind of oil or ointment on burns
- give anything to eat or drink or over cool the casualty
- use cotton wool or other fluffy material on burns.

### Minor Burns

- Cool by water till pain disappears
- cover burnt area with sterile or clean dressings

### Chemical Burns

- cool by water for at least 15 minutes
- cover wound
- send to hospital

# Fracture

## Causes

- Direct force
- Indirect force

## Types of Fracture

**Simple** a fracture where the skin surface around the damaged bone is not broken

**Open** a broken bone end penetrates the surface of the skin, the fracture is said to be “open”

**Complicated** a fracture is said to be “complicated” when there is an associated injury.

For example, if an important structure, nerve or organ is damaged by the broken bone end when a fracture is associated with a dislocated joint.

## General Signs & Symptoms

- the snap of the bone may have been felt or heard
- pain at or near the site of injury increased by movement
- movement may be difficult or impossible
- tenderness at the site of the fracture when gentle pressure is applied over the affected area
- swelling and, later bruising of the injured part
- deformity at the site of the fracture
- coarse bony grating (crepitus) may be heard or felt upon examination - this should never be sought deliberately.
- shock may occur

## General treatment for fracture

- DRABC
- always control severe bleeding before immobilising any fractures
- place sufficient padding to support fracture site
- immobilise fracture site
- treat or prevent shock
- nothing to eat or drink
- send to hospital

## **Poisoning**

- Any substance that causes injury, illness or death when introduced into the body

Routes:

### **Ingested poisons**

through the mouth by eating or drinking poisonous substances

### **Inhaled poisons**

through the lungs by inhaling industrial gases, chemical vapours or fumes from fire and petrol engine exhausts

### **Injected poisons**

by injection into the skin as the result of bites from some animals, insects, poisonous fish or reptiles or by hypodermic syringe.

### **Absorbed poison**

by absorption through the skin via contact with poisonous sprays such as pesticides and insecticides.

## **General Treatment for Ingested Poison**

- DRABC
- don't induce vomiting
- give milk or water to dilute down the poison
- monitor vital signs and prevent shock
- observe the amount and colour of vomitus
- send to hospital

## **Electrocution**

- Electricity can be very dangerous unless used with care. When an accident occurs with electricity, the First Aider must remember that it is not safe to touch the casualty until the power has been turned off.

### **Signs and Symptoms**

- signs of surface and or internal burns
- breathing and heart beat stopped

### **Treatment**

- DRABC
- Cut off power supply
- if impossible, remove victim from source with non-conductive material

- cover burnt area with clean dressing
- send to hospital

***\*NEVER APPROACH THE CASUALTY IN A HIGH-VOLTAGE ZONE, AS THE FIRST AIDER  
MAY ENDANGER HIS OWN LIFE WITHIN 18 METRES\****

## **Heat Exhaustion & Heat Stroke**

### **Heat Exhaustion**

Occurs when there is a loss of body fluid due to over exposure to a Hot environment

### **Heat Stroke**

Occurs when the heat regulating mechanism of the brain fails. The body temperature rises to 40°C+

#### **Signs & Symptoms**

<b>Skin condition:</b>	pale, cold, clammy	flushed, hot, dry
<b>Pulse:</b>	rapid and weak	full and bounding
<b>Breathing:</b>	rapid and shallow	full and deep
<b>Mental State:</b>	fatigue/confusion	restlessness/unconsciousness
<b>Others:</b>	loss of co-ordination/muscle cramps	rapid rise of body temperature

### **Treatment for Heat Exhaustion**

- DRABC
- lay casualty down and elevate the legs
- if casualty is conscious, sips of drinks may be given
- cool body temperature down
- if vomiting occur, seek urgent medical aid

### **Treatment for Heat Stroke**

- DRABC
- position the casualty with head and shoulders slightly elevated
- remove clothing
- lower the victim's body temperature
- place wet sheet over and fan the victim
- send to hospital quickly

## **Hypothermia**

This occurs when body core temperature falls below 35°C.

### **Signs & Symptoms**

- casualty feels cold
- shivering develops
- skin becomes pale
- Shivering decreases as body temperature falls
- decrease in muscular co-ordination
- confusion and irrational behaviour
- breathing and pulse slow down
- loss of consciousness
- breathing and pulse become harder to detect

### **Treatment**

- remove from cold environment
- keep casualty lying flat
- rewarm the casualty gently
  - blankets, body to body warmth
  - place hot packs to groin, armpits and side of neck
- monitor vital signs
- seek medical aid

## **Snake Bite**

### **Signs & Symptoms**

- If condition is severe, the victim may develop asphyxia and shock

### **Treatment**

- reassure the casualty and stay calm
- clean wound with soapy water
- apply bandaging on injured limb
- don't let the victim move around
- apply cold compress on wound

## **Asthma Attacks**

Respiratory disorder characterized by recurrent episodes of difficulty in breathing.

### **Signs and Symptoms**

- fearful, fatigue
- sweating, wheezing
- rapid and tense breathing
- difficulty in breathing and talking
- use of accessory muscles to breathe

### **Treatment**

- reassure the casualty and stay calm
- sit casualty up right
- open airway
- assist breathing if necessary
  - Ventolin puff
  - oxygen therapy
- send to hospital

## **Epileptic Seizures**

Epilepsy is a condition which results from a tendency towards brief disruptions in the normal electrical activity of the brain.

### **Minor Epilepsy**

- This type of seizure can pass unnoticed because the casualty often only appears to be daydreaming.

## **Major Epilepsy Seizures**

- It is often referred to as a “Grand Mal” seizure. Most occur without any warning.

### **Signs & Symptoms**

- suddenly loses consciousness and falls to the ground, sometimes letting out a strange cry
- becomes rigid for a few seconds and normal breathing may cease
- muscles then begin convulsive movements
- breathing may be laboured or noisy through clenched jaws
- congestion around face and neck with poor skin colour
- frothy saliva may appear around the mouth
- loss of bladder and bowel control

### **Treatment**

- DRABC
- protect the casualty from further injury
- manage any injuries
- keep an open airway by turning casualty to one side (recovery position)
- do not attempt to prise the casualty’s mouth open
- do not try to restrain the convulsive movements of the body
- do not give the casualty anything to eat or drink until recovery is complete
- any seizure which lasts longer than 5- 10 minutes, seek medical help

End