SPPR 1832
OUTDOOR EDUCATION

By

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First Aid

Principles of First Aid

- First Aid begins immediately the injury or sickness occurs & continues until medical aid arrives or casualty recovers.
- First Aid is very important because:
  - Preserve life
  - Protect the unconscious casualty
  - Prevent the injury or illness from becoming worse
  - Promote recovery

Casualty Assessment and Management

- History (what actually happen?)
- Signs
  - See
  - Hear
  - Feel
  - Smell
- Symptoms (what the casualty feels & describes)

Casualty Assessment and Management

- Casualty
  - Unconscious & not breathing
  - Unconscious & breathing
  - Conscious
  - Multiple causalities
- Move injured Casualty
  - One person
  - Two person
- Secondary Assessment
  - Head to toe examination
- Medical Aid
  - Dial 999 or 112 (mobile phone)

Emergency Action Plan

- D – danger
- R – response
- A – airway
- B – breathing
- C – circulation
- H – hemorrhage
- F - fractures

D- danger

- To you
- To other
- To the casualty
- Make sure that no one else gets hurt. You will not be able to help if you are also a casualty
- Only proceed if it is safe to do so.

R - response

- Is the casualty conscious?
  - gently shake the casualty and ask : 'Can you hear me?' , 'What is your name?'
  - if the casualty is **conscious**, check for and manage bleeding and other injuries
  - if the casualty is **unconscious**, he/she should be turned on the side.

A- airways

- Turning an unconscious casualty on the side to clear and open the airway
  - Kneel beside the casualty.
  - Place the casualty's farther arm at a right angle to the body.
  - Place the nearer arm across the chest.
  - Bend the nearer knee up.
  - Roll the casualty away from you. Support the casualty in this position until airway and breathing have been checked.
  - A Clear and open the AIRWAY
- Clearing the airway
  - with the casualty supported on the side, Tilt the head backwards and slightly down.
  - Open the mouth and clear any foreign object. Only remove dentures if loose or broken.
- Opening the airway
  - Place one hand high on the casualty's forehead.
  - Support the chin with the other hand.
  - Gently tilt the head backwards.
  - Lift the jaw forward and open the casualty's mouth slightly.

B - breathing

- Look for the chest rising and falling.
  - listen for the sound of breathing
  - feel woth your cheek
- If the casualty is **breathing** , ensure that he/she is in a stable side position. Check for and managed bleeding and other injuries.
- If the casualty is **not breathing**, turn onto the back and commence EAR (expired air resuscitation) , giving 5 full breaths in 10 seconds.

EAR

- Knee beside the casualty.
- Keep the casualty's head tilted back.
- Pinch the casualty's nostrils with your fingers or seal with your cheek.
- Lift the jaw forward with your other hand.
- Take a deep breath and open your mouth wide.
- Place your mouth firmly over the casualty's mouth making an airtight seal.
- Breathe into the casualty's mouth.
- Remove your mouth and turn your head to observe the chest fall and listen or feel for exhaled air.
- If the chest does not rise and fall , check head tilt position first , then check for and clear foreign objects in the airway.
- Give 5 full breaths in 10 seconds , then check the carotid (neck) pulse for 5 seconds. If pulse is present, continue EAR at the rate of 15 breaths per minute.

C - circulation

- Feel the pulse at the neck (carotid pulse)
- If pulse is present , continue EAR at the rate of 15 breaths per minute. Check breathing anf the pulse after 1 minute, then after every 2 minutes
- If pulse is not present, commence CPR (cardiopulmonary resuscitation)
- Check breathing and the pulse after 1 minute , then after every 2 minutes. If the pulse returns, continue EAR. If breathing returns , turn the casualty to a stable side position. Check for and manage shock, bleeding and other injuries
- Seek medical aid.

CPR – cardio-pulmonary resuscitation

- Combination of Expired Air Resuscitation (EAR) & External Cardiac Compression (ECC)

	Breaths	Compress	Cycle per min	How	Depth
Adult	1 or 2	15 or 5	4 or 12	2 hands	4-5 cm
Children (1-8 yrs)	1	5	12	1 hand	2-3 cm
Infants (<1 yrs)	1	5	12	2 fingers	1-2 cm

H –hemorrage (External bleeding)

- Symptoms and signs
  - obvious bleeding.
- Management
  - DRABC
  - lay casualty down
  - apply direct pressure to the site of bleeding
  - raise and rest the injured part when possible
  - loosen tight clothing
  - give nothing by mouth
  - seek medical aid urgently.
- Direct pressure
  - Apply direct pressure to the wound with your fingers or hand.
  - As soon as possible , place a clean dressing over the wound. Apply a bulky pad extending beyond the edges of the wound, and firmly bandage. If bleeding continues , leave the dressing in place and relocate the pad.
  - Do not disturb pads or bandages once bleeding is controlled.

H –hemorrage (Internal bleeding)

- Symptoms and signs
  - Coughing / vomiting up red frothy blood
  - passing of faeces with a black, tarry appearance
  - passing urine which has a red or smoky appearance.
  - Concealed bleeding within the abdomen may be suspected when there is :
    - Pain / tenderness / rigidity of abdominal muscles.
  - faintness or dizziness
  - restlessness
  - Nausea / thirst
  - weak , rapid pulse
  - cold , clammy skin
  - rapid , gasping breathing
- Management
  - lay the casualty down
  - raise the legs or bend the knees
  - loosen tight clothing
  - seek medical aid urgently
  - give nothing by mouth
  - reassure the casualty

H –hemorrage (uncontrolled bleeding)

- **Apply pressure to the pressure points**. These are found on the **main artery above the wound**. When bleeding has been controlled, remove pressure to the point and reapply direct pressure to the wound.
- Using a constrictive bandage
  - Select a strip of firm cloth, at least 7.5 centimeters (3 inches) wide and about 75 centimeters (30 inches)long. This may be improvised from clothing or a narrow folded triangular bandage.
  - Bind the cloth strip firmly around the injured limb above the bleeding point until a pulse can no longer be felt beyond the constrictive bandage and bleeding is controlled. Tie firmly.
  - Note the time application. After 30 minutes, release the bandage and check for bleeding . If there is no bleeding, remove it .If bleeding recommences, apply direct pressure. If this is unsuccessfully, reapply the constrictive bandage, and recheck every 30 minutes.
  - Ensure that the bandage is clearly visible and inform medical aid of the location and time of its application.

F - fractures

- Any bone which gets broken with or without displacement of broken Fragments.

- **Identification / look out for:**
  - Very intense pain increasing on movement of affected area.
  - Bruising may or may not be there
  - Swelling
  - Injured area looks abnormal as compared to opposite side
  - Difficulty in moving the injured area.
  - Shock
  - Unconsciousness may temporarily be there.

F - fractures

- **What to do:**
  - **Immobilisation** of the affected area is required - Get Help!
  - Keep the patient still and support the injured area.
  - For arm fractures a sling can be made to support and immobilise the affected area, which can be hung around the neck using triangular bandage or cloth.
  - Splints (any long firm object) can be used for support and immobilisation,but usually splinting to another part of the body is best.
  - In case of leg fractures the patient's both legs can be tied together. Open fractures - control the bleeding with sterile dressing and pressure if required.

F - fractures

- **Do not:**
  - Give massage to affected area
  - Try to straighten the broken limb
  - Move the patient without support
  - Ask the patient to move on his own
  - Move the joints above and below the fracture

Bandaging

- Bandages are use to:
  - Keep dressing in place
  - Apply pressure to control bleeding
  - Support strains & sprains
  - Give support to injured limbs
  - Restrict movement
  - Hold splints in position
  - Apply pressure too reduce swelling

Overexposure to extreme environmental temperature

Types	Heat cramps (37°C)	Heat Exhaustion (37 – 39°C)	Heat Stroke (40 – 42°C)
Signs / symptoms	-Muscle cramps -Nausea / vomiting -Tired / weak -Faint / dizzy -Cool, clammy skin	-Thirsty -Headache -Dilated pupils -Profuse sweating -Rapid breathing	-Bloodshot eyes -Contracted pupils -Hot, flushed, dry skin -Rapid, bounding pulse
Management	-Remove to cold place -Drink cold water -Gently stretch (don't massage)	-Cold by fanning -Sponge with cold water --Apply ice packs to armpits & groin	-Wrap with wet sheet or blankets

Bites and Stings

- Pressure & immobilization management
  - Funnel-web spider
  - Snakes
  - Blue-ringed octopus
  - Cone shells
  - Box jelly fish
- Ice compress (swollen)
  - Red-back spider
  - Scorpions
  - Centipedes
  - Bees
  - Ants
- Hot water management
  - Stonefish
  - Stingrays

Others

- Hypothermia
  - Body temperature drops below 35^{o}C
  - Symptoms
    - Extreme shivering
    - Slurred speech
    - Amnesia
    - Pale, cool skin
  - Management
    - Remove any wet cloth
    - Rewarm slowly (share body heat / blankets)
    - Give warm drinks / foods

Others

- Burns
  - Types
    - Dry (fire, hot objects, friction, electricity)
    - Wet (hot liquids, steam)
    - Radiation (direct sunlight, UV, infra-red rays)
    - Chemical (acids, alkalines)
  - Classification of Burns – depth & surface area
    - Depth (superficial, intermediate, deep)
    - Surface area
  - Management
    - Cool the burnt area with water up to 20 min by
    - Holding the injured part under slow running cold water
    - Immersing the injured part in cold water