**Report on**

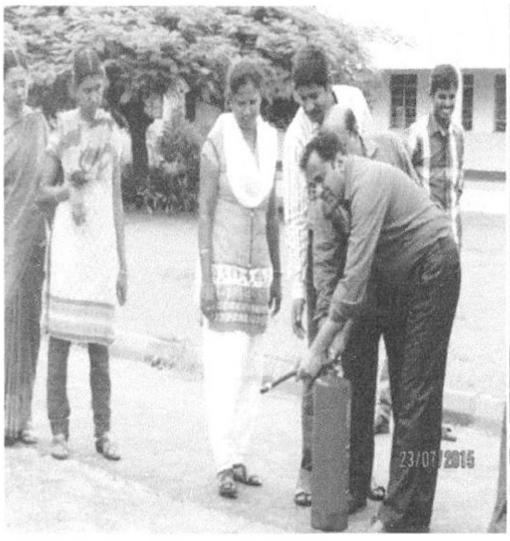
**Training on Emergency Health care (First Aid) for secondary school Teachers of southern States**

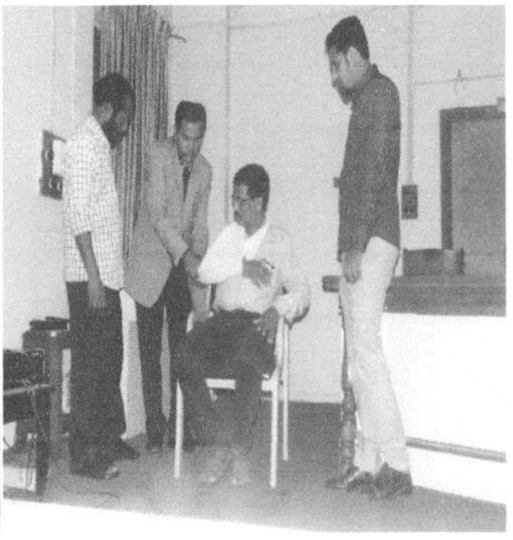
**Held at**

**Regional Institute of Education Mysore. RIE**

**(National Council of Education Research and Training, NCERT)**

**20th to 24 July 2015**



**Co-Ordinator**

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**DESM, RIE, Mysuru.**

## 1.0 Introduction

A step towards the school safety and Need for the workshop

Hon'ble Supreme Court of India has also come out with its judgment in support of schools safety, and insisted on adherence to NBC standards in school building specifications and construction. In its judgment of April13, 2009 on Writ Petition(Civil)no. 483 of 2004, the court has recognized that "Right to education incorporates the provision of safer schools" and given direction on several aspects of school safety including : a) Fire Safety Measures in Schools (Point 3.1 page 23) b) Training of School Teachers and other Staff (Point 3.2 page 25) c) School Building Specifications (Point 3.3 page 27) d) Clearances & Certificates (Point 3.4 page 29). In response to Writ Petition (Civil) no.483 of 2004 , the court held that "Evaluation of structural aspect of the school may be carried out periodically...the concerned engineers and officials must strictly follow the National Building Code. The safety certificate be issued only after proper inspection. Dereliction in duty must attract immediate disciplinary action against the concerned officials.

Access to education is a fundamental right of every child conferred by the Constitution of India. Included as one of the Millennium Development Goals, access to education has been active on the agenda of the Government of India for a long time. As with other infrastructure, schools are also exposed to disaster risk. Disasters have not only challenged the government and other stakeholders in providing access to education but also endangered the lives of children and those engaged in the pursuit of education here have been several instances of children losing their lives or suffering serious injuries due to various natural disasters.

The 2005 Kashmir earthquake resulted in collapse of over 8000 schools on both sides of the

Border; altogether over 18000 children lost their lives while at school (BBC 2005).

A fire led to the death of about 200 children at the prize giving ceremony in at a school in

Dabwali, Haryana in 1995; a total of 31 teachers died and 95 were injured.

During the 2001 Gujarat Earthquake over 11,600 schools were destroyed or damaged; 971 students perished and 1,051 were injured. (World Bank 2001).

Similarly the fire at Lord Krishna School in Kumbakonam, Tamilnadu cost the lives of 94 children.

Soon after thousands of students and teachers were killed, in the 2004 Tsunami.

Key causes for this state of affairs has largely been, poor quality of construction, lack of disaster resilient features and poor maintenance of schools added to this teachers lacking basic training in first aid and handling emergency situations. The fact remains that schools are indeed spaces where children and teachers spend a large part of their day. Therefore the quality of these spaces has a bearing on their vulnerability to disaster risk.

The Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters, adopted at the

World Conference on Disaster Reduction underlines the importance of knowledge and education as one of its five main priorities. It draws attention to school children and youth with the aim of making the community at large more aware of the threat of hazards and become better prepared.

School Safety' has been defined as the creation of safe environments for children starting from their homes to their schools and back. This includes safety from large-scale 'natural' hazards of geological/ climatic origin, human-made risks, pandemics, violence as well as more frequent and smaller-scale fires, transportation and other emergencies, and environmental threats that can adversely affect the lives of children.

The concept has evolved over the last couple of decades as the threat to the physical well being of children is utmost priority both globally and nationally.

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a) Fire Safety Measures in Schools (Point 3.1 page 23)
b) Training of School Teachers and other Staffs on Fire safety and First aid (Point 3.2 page 25)
c) School Building Specifications (Point 3.3 page 27)

d) Clearances & Certificates (Point 3.4 page 29) in response to Writ Petition (Civil) no.483 of 2004.

The court held that "Evaluation of structural aspect of the school may be carried out periodically...the concerned engineers and officials must strictly follow the National Building Code. The safety certificate be issued only after proper inspection. Dereliction in duty must attract immediate disciplinary action against the concerned officials." In addition to policy interest in addressing structural aspects of safety, there have been changes in the school curriculum as well. The SSA, Central Board of Secondary Education (CBSE) and state boards have introduced disaster education in curriculum for school education. The most recent initiative by the government was the National School Safety Project implemented by NDMA in 47 districts of 22 states of the country. The Programme, essentially pilot in nature, had the following components:

http://supremecourtofindia.nic.in/courtnews/2009_is

**Objectives of the Training:**

1) To train teachers to develop skills of life saving procedures in emergency
2) To provide knowledge and skills regarding various First aid Procedures
3) To provide knowledge regarding the various risk the school may pose and preparedness to be done at the school.
4) To train the teachers as a Master Trainers in First aid and Emergency Health care. The participants can conduct the training in their respective school for students and teachers.
5) To train teachers regarding Fire safety and about different methods of operating fire extinguishers
6) To train teachers to maintain a well equipped first aid box in the school

**1.0 Target group /date of training /venue**

Secondary school teachers of south Indian states including, Kerala, Andhra Pradesh, Telangana, Tamil Nadu and Karnataka

Date of the Training - 5 days of training

20th to 24 July 2015

Venue of the training

RIE Campus ,Mysore ,Karnataka

2.0 Program coordinator and Resource person for the Training

Program coordinator :

Dr. C. Padmaja

Department of extension Education

Regional Institute of education (RIE) Mysore

Resource person for the Training:

1) **Dr. Kumar V.L.S**

   **National & South Asia Regional Disaster Team Member**

   **International Trainer on Dis aster Management.**

   **Indian Red Cross Society , National Headquarters**

2) **Dr. Pushpa Latha**

   **Principal**

   **District Training Centre**

   **Health and family welfare Department .Mysore**

   **Government of Karnataka**

## FIRST AID and Emergency Response Training Schedule

**This training will be delivered by the participatory methodologies covering the topics like management of Bleeding,Fratctures,Burn injuries, Drowning , shock, Heartattack, CPR,poisoning, Transportation of the injured and issues related to Disaster Management**

**Day-1**

| Sl. No. | Time | Event | Method |
|---|---|---|---|
| 1 | 8.30 to 9.30 | Breakfast | |
| 2 | 9.30 to 10.00 | Registration | |
| 3 | 10.00 to 10.45 | Inaugural Function:<br>▪ Welcome Address<br>▪ Objective of the camp<br>▪ Introduction of the Participants<br>▪ Pre test | |
| 4. | 10.45 to 11.00 | **Tea Break** | |
| 3. | 11.00 to 13.00 | Principles of First Aid and Role & Responsibilities of a First Aider. Priorities in First aid | Lecture /power point presentation/video show |
| 4. | 13.00 to 14.00 | **Lunch Break** | |
| 5. | 14.00 to 15.45 | Management of Wounds (Bleeding, Bone Fractures. (their types, symptoms and treatments | Demonstration Lecture /power point presentation/video show |
| 6. | 15.45 to 16.00 | **Tea Break** | |
| 7. | 16.00 to 17.00 | Practical on Bleeding and Bandages. Uses of bandages | Group exercise and participatory exercise |

## DAY-2

| Sl. No. | Time | Event | Method |
|---|---|---|---|
| 1. | 9.45 to 11.00 | Management of Fire Emrgency& Accidents. And operation of portable fire extinguishers.<br>First aid For burn injuries | Demonstration Lecture /power point presentation/video show |
| 2. | 11.00 to 11.15 | Tea Break | |
| 3. | 11.15 to 12.00 | Drowning, Rescue First aid management, improvised methods of preparation of Life Jackets | Lecture /power point presentation/video show |
| 4. | 12.00 to 1.00 | Disaster management(preparedness and Response) | Lecture /power point presentation/video show |
| 5. | 1.00-2.00 | Lunch break | |
| 6. | 2 pm -3pm | First aid For electric shock (Rescue & Recovery) | Lecture /power point presentation/video show |
| 7. | 03.15-5.00pm | Group exercise on School Disaster management plan | Group exercise and presentation by the groups |
| 8. | | Evaluation and Day Closure | |

## DAY-3

| Sl. No. | Time | Event | Methods |
|---|---|---|---|
| 1. | 9.30 to 9.45 | Review of Day 3 | |
| 2. | 9.45 to 11.30 | ABC of basic life support.<br>Cardio Pulmonary Resuscitation (CPR)<br>Management of heart attack and Disorders of circulation | Demonstration Lecture /power point presentation/video show |
| 3. | 11.30 to 11.45 | Tea Break | |
| 4. | 11.45 to 13.00 | CPR contd and Recovery position | |
| 5. | 13.00 to 14.00 | Lunch Break | |
| 6. | 14.00 to 15.00 | Management of Mass Casualties (Triage)<br>Different methods of Transportation of the injured<br>Manual and using improvised stretchers | Demonstration |
| 7. | 16.00 to 16.15 | Tea Break | |
| 8. | 16.00 to 17.00 | Improvisation method of FA equipment in times of Emergencies. | |
| 9. | 17.00 | Evaluation and Day Closure | |

**DAY - 04**

| Sl. No. | Time | Event | Method |
|---|---|---|---|
| 1. | 9.30 to 9.45 | Review of Day 4 | |
| 2. | 9.45 to 11.30 | Poisoning first aid management | |
| 3. | 11.30 to 11.45 | Tea Break | |
| 4. | 11.45 to 13.15 | Management of snake bite ,dog bite and bee bite | |
| 5. | 13.00 to 14.00 | Lunch Break | |
| 6. | 14.00 to 16.00 | Stretcher Preparation, Transportation and handling of casualty on stretchers (improvisation of stretchers with locally available material) an practical. | |
| 7. | 16.00 to 16.15 | Tea Break | |
| 8. | 16.15 to 17.00 | Management of chocking | |
| 9. | 17.45 to 18.00 | Evaluation and Day Closure | |

**Day-5:**

| Sl. No. | Time | Event | Methods |
|---|---|---|---|
| 1. | 8.45 to 9.00 | Review of Day 5 | |
| 2. | 9.15 to 11.00 | First aid management of fits and convulsion | Lecture /presentation |
| 3. | 11.00 to 11.15 | Tea Break | |
| 4. | 11.15 to 13.00 | Written Test , Viva and Practical test | |
| 5. | 13.00 to 14.00 | Lunch Break | |
| 6. | 14.00 to 14.30 | Mock drill videos | Field exercise |
| 7. | 14.30 to 16.00 | Simulation Exercise | |
| 8. | 16.00. to 16.20 | Tea Break | |
| 9. | 16.20 to 16.40 | Training feed back | |

## MATERIALS REQUIRED

- FA – First Aid Kit
- Triangular bandages, Roller Bandages, Crape Bandages,
- Wooden Splints
- Pressure bandages
- Blood stopper(type of Pressure bandage)
- Blanket and Wooden Poles for making stretcher
- Mankin for demonstration of CPR
- Drawing sheets and Marker pen for group execercise
- multimedia projector
- CD or DVD for participants ( videos and presentations of the Sessions)
- First aid Manuals
- Participants evaluation form
- White sheets
- Pre test and post test paper

## Methodology of the Training:

- Lecture and Discussion ( power point)
- Video show
- Demonstration and simulation
- Brain storming sessions and discussions
- Group exercise and participatory exercise
- Hands on Procedures
- Pre test and post test

**Topics covered in the Training**

1) Principles and priorities in First aid
2) Management of wounds bleeding and fractures
3) Management of fire hazards
4) First aid for Burn injuries
5) Transportation of the injured by manual method and using the stretcher
6) TRIAGE mass causality management
7) Management of Drowning
8) Management of Asthmatic situations in schools
9) Management of shock
10) CPR cardio pulmonary Resuscitation of Basic life support
11) Management of electric shock
12) Management of Fits and convulsion
13) Management of chocking
14) Different of methods of Application of Bandages
15) Management of Poisoning
16) Management snake bite

**EMERGENCY PHONE NUMBERS IN INDIA:**

100: Police and emergency help

102: Ambulance

101: Fire service

108: Emergency and disaster management

## CONTENTS



## FIRST AID

First aid is the immediate treatment given to a victim of an accident or sudden illness before the medical aid is obtained. By making use of material that are available on the spot. The person who provides this help is first aider.

### AIM'S OF FIRST AID

1) Preserve life.
2) Prevent condition from deteriorating.
3) Promote early recovery.

### TO PRESERVE LIFE

- AIRWAY: Open and clear.
- BREATHING: - If no Breathing start artificial Respiration.
- CIRCULATION: If no pulse start cardiac compression.

## TO PREVENT THE CONDITION FROM DETERIORATING

1) Dress the wound.
2) Immobilize fracture.
3) Position the casualty.

## TO PROMOTE EARLY RECOVERY

1) Reassure
2) Relieve pain
3) Handle gently. Protect from cold.

## FIRST AIDER RESPONSIBILITY

1) Assess a situation quickly and calmly.
2) Protect yourself and the casualty from danger put yourself at risk.
3) Assess the casualty: - Identify as for you can, the injury or the nature of illness affecting the casualty.
4) Give early treatment and treat the casualties with most serious life threatening condition first.
5) Arrange for appropriate help.
6) Call 108 /102 for emergency, help if suspect serious injury or illness, OR rake or send the casualty to hospital, OR take him to nearby clinic, stay with the casualty until care is available.
7) Stay with the causality till help arrives.

# DRESSIGS AND BANDAGES

## DRESSINGS

Dressing is a protective covering applied over a wound.

## USES OF DRESSINGS

1) To absorb discharges.
2) To prevent infection.
3) To control bleeding.
4) To avoid further injury.

## TYPES OF DRESSINGS

1) Non adhesive dressing.
2) Adhesive dressing.

## NON ADHESIVE DRESSINGS

1) A dressing pad attached to roller bandage.
2) A gauze dressing is made from layers of gauze.

## ADHESIVE DRESSINGS

Example: - Band – Aid, handyplast, Plaster,

Dressing should be always sterile.

## DRESSING CAN BE IMPROVISED FROM

Example: - Clean hand kerchief, linen paper or cellulose tissue.

# BANDAGES

## TYPES OF BANDAGES

Roller bandage.

Triangular bandage

## ROLLER BANDAGE

Triangular bandage

(a) Triangular bandage laid flat

(b) Folded once.

(c) Folded twice – broad fold bandage.

(d) Folded three times – narrow fold bandage

## USES OF BANDAGES

1) Maintain direct pressure over a dressing to control bleeding.
2) Retain dressings, slings and splints in position.
3) Prevent or reduce swelling.
4) Provide support for a limb or joint.
5) Restrict movement.
6) Assist in lifting and carrying casualties.

Bandages should not be used for padding when other materials are available.

## CHEST BANDAGE

## HEAD BANDAGE OR SCALP BANDAGE

## HIP BANDAGE

## HAND BANDAGE

Elbow bandage

Shoulder Bandage

Foot Bandage

## SLINGS

There are three types of slings

1) Arm sling
2) Triangular sling or elevation Sling
3) Cuff and collar sling

## TRIANGUALR SLING

## ARM SLING

## COLLAR & CUFF SLING

## WOUNDS AND BLEEDING

A wound is a break in the continuity of the skin. There will be bleeding from the injured part and it also forms an opening through which germs can get into the body.

| | | |
|---|---|---|
| INCISED WOUND | Lacerated wound | Contused wound |
| Abrasion wound | Punctured wound | Bullet injury |

## TYPES OF WOUNDS

1) Incised 2) Lacerated 3) Contused 4) Abration

### INCISED WOUND

Is caused by sharp instruments like knife, razor etc. The blood vessels are clean cut and so these wounds bleed very much.

### LACERATED WOUND

Is caused by machinery, falls on rough surfaces, claw of animals etc. these wounds have torn and irregular edges and they bleed less.

### CONTUSED WOUND

Is caused by blows by blunt Instruments. The tissues are bruised.

Punctured wound: - Is caused by pointed objects like needles, screwdrivers etc. They have small openings, but may be very deep.

### ABRASION

Superficial Scratch of skin

### COMPLICATIONS OF WOUNDS

1) Bleeding.
2) Infection.

## FIRST AID TREATMENT

1) Wash your hands thoroughly or clean with antiseptic lotion.
2) Make the patient sit or lie down
3) Handle the injured part as gently as possible.
4) Remove any foreign objects like glass, stones etc.
5) Place clean dressing over the wound and bandage firmly.
   This will help to control bleeding and to prevent infection.
6) Seek medical help if necessary.

## BLEEDING (Hemorrhage)

Injuries to the blood vessels cause bleeding.

Bleeding may occur from

1) Arteries
2) Veins
3) Capillaries

## RECOGNITION

### 1) Bleeding from arteries

The blood comes out in jets because it corresponds to heart beats and it is bright red. Arterial bleeding has the highest pressure.

### 2) Bleeding from veins

Venous blood is dark red in colour. Blood flows out in a continuous stream. It is under less pressure than arterial blood.

### 3) Bleeding from Capillaries

Blood oozes out slowly, if it is on the surface of the body may not be serious.

## TYPES OF BLEEDING

## EXTERNAL AND INTERNAL BLEEDING

If the bleeding is from the surface of the body it is called external bleeding.

If the bleeding is within chest, skull or abdomen etc. It is called internal bleeding. This cannot be seen immediately but later the blood may ooze out through the nose or ear or coughed up from the lungs, or vomited from the stomach.

## EXTERNAL BLEEDING

### YOUR AIMS

1) To control bleeding.
2) To prevent and minimize the effect of shock.
3) To minimize infection.
4) To arrange proper disposal.

### CAUTION

If bleeding is severe it can lead to Shock

### *FIRST AID*

## FIRST AID

1) Wash your hands thoroughly or put on disposable gloves.
2) Apply direct pressure over the wound.
3) Raise and support the injured limbs above the level of heart.
4) Handle the injured part as gently as possible.
5) Place clean piece of cloth or sterile dressing.
6) In case of big injuries do not allow the casualty to eat or drink because an anesthetic may be needed later.
7) If the casualty loses consciousness, open the airway and check breathing.

## CAUTION

If bleeding is severe it can lead to shock.

## RECOGNITION OF INTERNAL BLEEDING

1) Rapid, weak pulse
2) Thirst, rapid shallow breathing
3) Confusion, restlessness and irritability
4) Possible collapse and unconsciousness.
5) Information from the casualty that indicates recent injury or illness, pain at the site of injury.

## FIRST AID FOR INTERNAL BLEEDING

1) Lay the casualty down. Raise legs by use of pillows etc.
2) Keep calm and relaxed,
3) Reassure.
4) Do not allow him to move.
5) Keep warm with blankets or coats.

6) Do not give anything by mouth.

7) Do not apply hot or cold pack to chest or abdomen.

## AMPUTATION

A Limb that has been partially or completely severed.

### AIMS

1) To control bleeding.

2) To minimize effects of shock.

3) To arrange urgent removal to hospital. When part is completely severed.

### CAUTION

1) Do not wash the severed part.

2) Do not let the severed part touch the crushed ice when packing it.

3) Do not allow the casualty to eat or drink.

### FIRST AID

1) Control bleeding by applying direct pressure.

2) Raise the injured part above the heart.

3) Apply a Clean pad on the wound and place a sterile dressing.

4) Wrap the severed part in clean gauze or clean cloth then in a plastic cover, and place it in a container full of crushed ice. Mark the container with the time of Injure and the casualty's name.

5) Call ambulance.

## BLEEDING FROM SPECIAL SITES

Bleeding from the base of the skull

As a result of head injury blood and fluid (cerebral-spinal fluid) may flow out of the nose, ear or mouth.

## MANAGEMENT

1) Ask the patient not to blow the nose.
2) Do not pack ear or nose, but place a dressing on ear or nose and strap it in position.
3) Lay the casualty on the affected side.
4) Move the casualty to a hospital immediately.

## BLEEDING FROM THE NOSE

1) Bleeding usually stops within 5-10 minutes.
2) Seat the casualty with head slightly bent downwards.
3) Ask him to breathe through the mouth.
4) Loosen clothing at neck.
5) Pinch the soft part of the nose for 10 minutes.
6) Ask the casualty not to blow his nose for some hours.

## CHEST INJURIES

## COMFORTABLE POSITIONS

Chest injury on one side

Chest injury on both side or abdominal injury

Chest injury

## BREATHING AND ASPHYXIA

### BREATHING

Oxygen is essential to life. Every time we breathe in, air containing oxygen enters the lungs. This oxygen is then transferred to the blood, to be transported around the body. All the cells in the body use this Oxygen and Carbon dioxide, the waste gas enter the blood. This goes to lungs and it throws out during the process of breathing out.

### ASPHYXIA

Asphyxia is a condition in which the lungs do not get sufficient supply of air for breathing. Commonly referred to as suffocation. If this condition continues for some minutes, breathing and heart action stops and death occurs.

### CAUSES

1) Food going down the air passage.
2) Bronchial Asthma
3) Tongue falling back in unconscious patient.
4) Swelling of tissues of the throat
5) Chocking
6) Inhalation of fumes, smoke
7) Severe injury in chest.
8) Strangulation and hanging.

### AIMS AND ACTION

1) To assess the casualty's condition.

2) To identify and remove the cause of the problem and provide fresh air.
3) To comfort and reassure the casualty.
4) To maintain open airway, check breathing and be prepared to resuscitate if necessary.
5) To obtain medical help if necessary.
6) Problems with respiration can be life threatening and need urgent first aid.

**RECOGNITION**

1) Rapid breathing
2) Breathing that is distressed or gasping.
3) Difficulty in speaking
4) Grey-blue skin.
5) Anxiety
6) Restlessness and headache.
7) Nausea and possibly vomiting.
8) Cessation of breathing if the oxygen supply is not restored.

## CHOCKING

A foreign object that is stuck in the throat may block it and cause difficulty in breathing and leads to chocking.

### Heimlich procedure

Towards the head.

## CHEST THRUST

### RECOGNITION

**Obstruction**

Casualty is unable to speak, cough, or breathe, with eventual loss of consciousness.

### AIMS

To remove obstruction.

To arrange urgent removal to hospital if necessary.

### CAUTION

If at any stage the casualty loses consciousness, open the airway check breathing, if not breathing begin

## HANGING AND STRANGULATION

If pressure is exerted on the outside of the neck, the airway is squeezed and the flow of air to the lungs will be cut off.

The main causes of such pressure are

### HANGING

Suspension of the body by a noose around the neck

### STRANGULATION

Constriction or squeezing around the neck or throat.

### RECGNITION

A constricting article around the neck.

Marks around the casualty's neck.

Rapid, difficult breathing; impaired consciousness; grey-blue skin.

Congestion of the face, with prominent veins and, possibly, tiny red spots on the face or on the whites of the eyes.

**AIMS**

1) To restore adequate breathing.
2) To arrange urgent removal to hospital.

**FIRST AID**

1) Do not move the casualty unnecessarily.
2) Do not destroy or interfere with any material that has been constricting the neck, such as knotted rope. Police may need it as evidence.
3) If the casualty is unconscious, open the airway check breathing.

## DROWNING

**Drowning can result in**

Spasm of the throat due to entry of water into the airways which causes the airway to become too narrow. It can also lower the body temperature to low levels, which can be dangerous. Which may leads to sudden cardiac arrest.

**AIMS**

1) To restore adequate breathing.
2) To keep casualty warm.
3) To arrange urgent removal to hospital.

## CAUTION

1) If the casualty is unconscious, open the airway and check breathing.
2) If the casualty not breathing give rescue breaths.
3) Be prepared to resuscitate.

## SHOCK

This life threatening condition occurs when the circulatory system (which distributes oxygen to the body tissues and removes waste product) fails and, as a result, vital organs such as the heart and brain are deprived of oxygen. It requires immediate emergency treatment. Shock can be made worse by fear and pain.

## RECOGNITON

1) Pale, cold, clammy skin.
2) Sweating.

### As shock develops

1) Rapid, shallow breathing.
2) A rapid, weak or threaddy pulse.
3) Grey-blue skin(cyanosis)
4) Weakness and dizziness.
5) Nausea and possibly vomiting. Thirst
6) Restlessness and aggressiveness
7) Yawning and gasping for air.
8) Unconsciousness
9) Finally, the heart may stop.

## CAUSES

1) Severe bleeding. as in severe external and internal injuries.
2) Severe burns
3) Severe fluid loss. (example:- severe vomiting and or loose motion)
4) Severe infection in the blood.(Septicaemia)

## AIMS

1) To recognize shock
2) To treat obvious cause of shock
3) To improve blood supply to the brain, heart and lungs.
4) To arrange urgent removal to hospital.

## CAUTION

1) Do not allow the casualty to eat or drink
2) Do not leave the casualty un attended, unless you have to call ambulance.
3) Do not warm the casualty with hot water bottle.
4) If the casualty loses consciousness, open the airway and check breathing.

## FIRST AID

1) Lay the casualty down. Raise legs by use of pillows etc.
2) Keep him calm and relaxed.
3) Reassure
4) Do not allow him to move.
5) Keep warm with blankets or coats.
6) Do not give anything by mouth
7) Do not apply hot pack or rub the hands or feet.

8) Do not leave the casualty un attended, unless you have to call ambulance.

9) If the casualty loses consciousness, open the airway and check breathing.

## FRACTURES

A fracture is a break, crack or bend in the bone.

### CAUSES OF FRACTURES

Generally force of sufficient strength causes break in the bone.

Force can act directly or indirectly.

### DIRECT FORCE

When bone breaks at the point of application of force it is known as fracture causes by direct force.

### INDIRECT FORCE

When it breaks away from the point of application of force it is called as fracture caused by indirect force.

### TYPES OF FRACTURES

1) Simple fracture. (Closed fracture)
2) Compound fracture (Open fracture)
3) Complicated fracture.

### RECOGNITION

1) Pain experienced by casualty.
2) Pain on gentle touch or pressure. (Tenderness)
3) Swelling.

4) Limitation or loss of normal movements.
5) Altered shape or form (Deformity).
6) Uneven surface (Irregularity).
7) Crackling sound due to rubbing of pieces of bones (Crepitus)

## TYPES OF FRACTURE

## FIRST AID (IMMOBILIZATION)

1) To minimize pain.
2) To immobilize the fracture.
3) Steady and support the injured part,
4) If possible provide more permanent support, with padding and firm bandag9ing or splinting.
5) Uninjured part of the body is the best form of Splint
6) Arrange for appropriate medical treatment.

**Treatment of fractured Jaw**

## UPPER LIMB FRACTURE

## FINGER FRACTURE

## LOWER LIMB FRACTURE

## TRANSPORTING SPINAL INJURY CASUALTY BY BLANKET LIFT METHOD

Treatment for spine injuries

## STRAINS AND SPRAINS

## STRAIN

When a muscle is over stretched few fibers may be torn causing a 'strain'.

## SPRAIN

This is a tear of a part of the supporting tissue in a joint. (Damage to ligament). This is normally caused by a sudden twisting moving of the joint.

## RECOGNITION

1) Pain and tenderness.
2) Difficulty in moving the injured joint.
3) Swelling and bruising in the area.

## AIMS

1) To reduce the swelling and pain.
2) To obtain medical help if necessary.

## FIRST AID

## RICE TREATMENT FOR SPRAIN

1) R-Rest the affected area
2) I-Apply Ice pack OR Cold pad
3) C-Compress the affected area with soft even pressure.
4) E-Elevate the affected part and support

## POISONING

A poison (toxin) is a substance which, when consumed or absorbed into the body in sufficient quantity, can cause damage to health or can cause death.

## POISON CAN ENTER THE BODY

**Through**

1) Mouth (Swallowing)
2) Nose (Inhaling)
3) Skin (Injections or bites, absorption)

**Example for commonly swallowed poison**

1) Drugs and alcohol
2) Sleeping tablets
3) Cleaning products
4) Pesticides

**Possible effects of swallowing poison**

1) Nausea and vomiting.
2) Abdominal pain
3) Seizures.
4) Irregular, or fast or slow heartbeat
5) Impaired consciousness

**ACTION**

1) Monitor casualty
2) Call for emergency help
3) Commence CPR if necessary
4) Use face mask to protect yourself if need to give rescue breath

**Examples of commonly inhaling poisons**

1) Fumes
2) Industrial poisons (commonly in vapor forms)
3) Smoke.

**POSSIBLE EFFECTS**

1) Difficulty in breathing.
2) Suffocation and irritation
3) Grey-blue skin

**ACTION**

1) Remove the casualty to a place entering clean air.
2) Provide if oxygen available
3) Call emergency help
4) Commence CPR if necessary

**Examples of poison entering through the skin**

1) Chemical spill over the skin
2) Venom from stings and bites
3) Drugs

**POSSIBLE EFFECTS**

4) Pain, redness and swelling at the site of entry.
5) Blurred vision, nausea and vomiting.
6) Difficulty in breathing
7) Seizures.

8) Impaired consciousness.

9) Life threatening reaction to the poison (Anaphylaxis)

**ACTION**

1) Wash the affected part thoroughly with large amount of water. If it is a chemical spill.
2) If there is sting remove if possible.
3) Call for emergency help.
4) Commence CPR if necessary.

## UNCONSCIOUSNESS (Insensibility)

This results from an interruption of the brain's normal activity.

**CAUSES OF UNCONSCIOUSNESS**

1) Brain injury.
2) Fainting.
3) Skull fracture
4) Epilepsy (fits)
5) Heart attack
6) Cardiac arrest
7) Apoplexy (stroke)
8) Shock
9) Poison
10) Diabetic coma / over dose of insulin
11) Heart stroke / heat exhaustion
12) Infantile convulsion.
13) Severe infection

**Check carotid pulse**

If no pulse Chest compressions

Breathing and pulse present but unconsciousness put him Recovery position

## BRAIN INJURY

### CONCLUSION

It can be results of mere shake up of the brain in side of skull.

### COMPRSSION

Due to pressure over the brain tissue.

### DO'S FOR AN UNCONCIOUSNESS CASUALTY

1) Ensure that the air passages are clear (Open airway)
2) Provide fresh air.
3) Check for breathing and start respiration if necessary
4) Check for pulse and if no pulse start cardiac compression
5) If the casualty is unconscious but breathing is present, place him recovery position.
6) Monitor breathing and pulse.

### DON'T

1) Do not give a drink or food by mouth
2) Do not induce vomiting.
3) Don't leave an unconscious casualty unattended.

## CHEST COMPRESSION

### *IF NO PULSE START C P R*

1) Casualty should be made to lie on a hard surface upwards.
2) Position yourself at the victim's side.
3) Place the heel of one hand on the center of the victim's chest on the lower half of the Breast bone.
4) Put the heel of your hand on top of the first
5) Straighten your arms and position your shoulders directly over your hand.
6) Press down at least 5 cm (2 inch) with each compression. Push straight down.
7) Deliver compressions on a smooth fashion at a rate of at least 100 per minute.
8) At the each compression, allow the chest to recoil completely.
9) Minimize interruption.

After 30 compressions move towards the side of the casualty's face.

## C P R – CARDIO PULMONARY RESUSTATION

| | | |
|---|---|---|
| A – AIRWAY | | C – CIRCULATION |
| B – BREATHING | OR | A – AIRWAY |
| C – CIRCUALTION | | B – BREATHING |
| | | C A B Sequence |

Asses the scene safety

Asses the Victim for Response (Shake and Shout for help)

Check for breathing

Activate Emergency response system

Check carotid pulse (within 5-10 seconds) if not felt perform 5 Cycles of compressions and breath (30 : 2 rate)

Starting with compression (C A B Sequence)

Not less than 100 times compression

**OPEN THE AIRWAY**

1) Place one hand on the victims fore head and push with your palm to tilt the head back. At the same time.
2) Place the fingers of the other hand under the bone part of the lower jaw near the chin.

   Lift the jaw to bring the chin forward

**IF NOT BREATHING BEGIN ARTIFICAL RESPRIRATION.**

**MOUTH TO MOUTH BREATHS**

1) Hold the victim's airway with a head tilt chin lift.
2) Pinch the nose closed with you thumb and index finger using the hand on the fore head.
3) Take a regular breath and seal your lips around the victim's mouth, creating a tight seal.
4) Give 1 breath. Blow for about 1 sec watch for chest rise.
5) If the chest does not rise, repeat head tilt and chin lift.
6) Give a Second breath for about 1 Second watch for chest rise.
7) 2 Breaths are given at the rate of 10-12 per minute.

After 2 breaths move to the side of the chest and begin compressions as done earlier.

Continue 5 cycles without break. Then check pulse

If pulse has not returned. If help has not arrivedl continue another 5 cycles of 30 compression and 2 breath (30:2)

## COMPRESSON – VENTILATION RATIO

ADULT VICTIMS: - 30 Compression and 2 Ventilations

1 or 2 Rescuers.

CHILDREN AND INFANTS: - 30:2 for single Rescuer

15:2 for Two Rescuer

## BURNS AND SCALDS

### BURNS

1) Burns are injuries caused by dry heat like fire, hot objects, flames etc.

### SCALDS

2) Scalds are injuries caused by moist heat like Hot water, Steam, Hot oil.

Burns are also caused by electric current either low voltage (domestic) or high voltage (Overhead cables, mains.)

### COLD BURNS

1) Contact with freezing metals.
2) Frost Bite.
3) Contact with freezing vapors, such as liquid Oxygen or liquid Nitrogen

### CHEMICAL BURN

a) Industrial chemicals, corrosive gases, inhaled fumes.

b) Domestic chemicals and agents, such as paint stripper, caustic soda, weed killers, bleach, or any other strong acid.

## DEPTH OF BURNS

1) SUPERFICIAL BURNS (1 Degree burns):- Very painful, dry, red burns which blanch with pressure. Damage only superficial layers of the skin.
2) PARTIAL THICKNESS BURNS ($2^{nd}$ Degree burns):- This affects the epidermis, and the skin become red and raw. Blister form over the skin due to fluid released from the damaged tissue beneath.
3) FULL THICKNESS BURNS ($3^{rd}$ Degree burns):- In full thickness burns, all the layers of the skin underlying tissue also may be burnt, pain sensation can be lost, which masks the severity of the injury. The skin may look waxy, pale or charred and needs urgent medical attention.

## MAJOR BURNS

**Recognition- There may be**

1) Possible areas of superficial, partial thickness and/or full thickness burn.
2) Pain.
3) Difficulty in breathing.
4) Features of shock.

## YOUR AIMS

1) To relieve pain.
2) To minimize the risk of shock.
3) To minimize the risk of infection.
4) To treat associated injuries.
5) To arrange urgent removal to hospital.

## CAUTION

1) Do not remove anything sticking to the burn, you may cause further damage and introduce infection into a burn area.
2) Do not burst any blisters.
3) Do not apply any type of lotion or ointment to the burnt area, it may damage tissues and increase the risk of infection.
4) If the casualty has a burn on his face, do not cover the injury, you could cause the casualty distress and obstruct the airway.
5) Do not allow the casualty to eat or drink because he may need an anesthetic.

## FIRST AID FOR MAJOR BURNS

1) Help the casualty to sit or lie down.
2) Start cooling the burnt area.
3) Flood the burn with plenty of cold water.
4) Do not over cool.
5) Do not touch or otherwise interfere with the burn.
6) Reassure the casualty and treat him for shock.
7) Call ambulance 108.
8) Urgent removal to hospital.

## RULES OF NINES

## MINOR BURNS AND SCALDS

## RECOGNITION

1) Reddened skin.
2) Pain in the area of burn.
3) Blistering of affected skin.

## YOUR AIMS

1) To relieve pain and swelling.
2) To minimize the risk of infection.

## CAUTION

1) Do not break blisters or otherwise interfere with the injured area.
2) Do not apply ointments or fats, the may damage tissues and increase the risk of infection.

## FIRST AID FOR MINOR BURNS

1) Flood the injured part with cold water.
2) Gently remove any constricting clothing, watch, belts. etc
3) Cover the burn with sterile dressing and bandage loosely.
4) Seek medical aid if necessary.

## ELECTRICAL BURNS

### RECOGNITION- There may be

1) Unconsciousness.
2) Full thickness burns, with swelling, scorching and charring.
3) Burns at points of entry and exit of electricity.
4) Signs of shock.

## YOUR AIMS

1) To treat the burn and shock.
2) To arrange urgent removal to hospital.

## CAUTION

1) Do not approach a victim of high-voltage electricity until you are officially told that the current has been switched off.
2) If the casualty is unconscious, open the airway and check his breathing.

## CHEMICAL BRUNS

A chemical in the accident spot which caused he burns.

**RECOGNITION** – There may be

1) A chemical in the accident spot where caused to chemical burn.
2) Intense, stinging pain.
3) Discoloration, blistering and peeling.
4) Swelling of the affected area.

## YOUR AIMS

1) To inform the relevant authority.
2) To disperse the harmful chemical from surface of the body by washing thoroughly.
3) To arrange transport to hospital.

## CAUTION

1) Never attempt to neutralize acid or alkali burns unless trained to do so.
2) Do not delay starting treatment by searching for an antidote.
3) Notify the safety officer and/or emergency services.

## FIRST AID FOR CHEMCIAL BURNS

1) Make sure that the ar3ea around the casualty is safe.
2) Flood the burn with water for at least 20 minute.

3) Gently remove any contaminated clothing while flooding injury.

4) Arrange to take or send the casualty to hospital.

## MISCELLANEOUS CONDITIONS

### CRAMPS

A sudden spasm of a muscle is called cramp. This may happen during exercise or by chilling. It may also occur due to loss water from the body as in cholera, excessive vomiting etc. The muscles of the thighs, legs, hands and feet may develop cramps commonly.

### MANAGEMENT

Stretch the affected muscles.

1) **IN THE CALF:-** Straighten the knee with your hands, draw the foot up towards the shin straighten the toes and make the person stand on his toes.
2) **IN THE HAND:-** Straighten out the fingers gently.
3) **IN THE THIGH:-** Straighten the knee and push the thigh forward gently.
4) **IN THE FEET:-** stretch the toes towards the skin.

Massage the affected part and apply warmth

If there has been loss of water from the body, give drinks of salt water.

## BITES AND STINGS

### SNAKE BITE

**RECOGNITION :** There may be

1) A pair of puncture marks.
2) The bite may be painless.
3) Severe pain, redness and swelling at the bite.

4) Nausea and vomiting.
5) Disturbed vision.
6) Increased salivation and sweating.
7) Labored breathing.
8) Breathing and heart may stop.

**YOUR AIMS**

1) To prevent venom spreading.
2) To arrange urgent removal to hospital.

**CAUTION**

1) Do not apply tourniquet, slash the wound with a knife or try to suck the venom.
2) If the casualty loses consciousness, open the airway and check the breathing.
3) Cover the site of bite.

**FIRST AID FOR SNAKE BITE**

1) Lie down, with head and shoulder raised.
2) Reassure the casualty.
3) Cover the bite area with clean cloth or bandage.
4) Immobilize the limb
5) Monitor vital signs, breathing and pulse.

## DOG BITE

Dog bites are sometimes very serious. If the animal is suffering from rabies, may transmit the rabies virus through it saliva in to the bitten person. Rabies is the disease affects in nervous systems.

## YOUR AIMS

1) To prevent rabies or other infection.
2) To get medical aid.

## MANAGEMENT

1) All dog bites must be treated as potentially a bite by a rabid dog.
2) Wash the wound thoroughly with plenty of soap and water.
3) Cover the wound with a dry, sterile, light dressing.
4) Get medical aid Send or take him to hospital.

## SCORPION BITE

Scorpion stings usually cause toxicity to the nervous system or circulatory system.

## AIM'S

1) To reassure the casualty.
2) To obtain medical help.

## FIRST AID

1) Reassure the victim.
2) Cover the wound with a sterilized dressing.
3) Send the casualty to hospital.

## OTHER BITS AND STINGS

Bites from certain species of Spider and Mosquito can cause serious illness.

**RECOGNITON**

Generally there will be

1) Pain, redness and swelling at site of sting.
2) Nausea and vomiting
3) Headache.

**YOUR AIMS**

1) To relieve pain and swelling.
2) To arrange removal to hospital if necessary.

**INSECT STING**

1) Usually sting from bee or wasp is painful rather than dangerous.
2) An initial sharp pain
3) Followed by mild swelling, redness and soreness
4) However, multiple insect stings can produce a serious reaction.

**RECOGNITION**

1) Pain at the site of the sting.
2) Redness and swelling around the site of the stings.

**YOUR AIMS**

1) To relieve swelling and pain.
2) 'To arrange removal to hospital if necessary.

**MANAGEMENT**

Reassure the casualty.

If the sting is visible, brush or scrape it

Raise the affected part if possible, and apply a cold compress such as an ice pack.

Monitor vital signs – level of response, breathing and pulse.

## MEDICAL EMERGENCES

## HYPERGLYCEMIA

Uncontrolled prolonged high blood sugar can result the unconsciousness and then diabetic coma. High blood sugar (hyperglycemia) develops slowly over a period of days. If it not treated, hyperglycemia will result in unconsciousness (diabetic coma) and so requires urgent treatment in hospital.

### RECOGNITON

1) Warm, dry skin.
2) Rapid pulse and deep labored breathing.
3) Drowsiness, leading to unconsciousness if untreated.
4) Smell of nail polish removal in the casualty breath.

### YOUR AIMS

1) To arrange urgent removal to hospital.
2) Call ambulance.
3) Monitor and record vital signs, level of response,
4) If casualty becomes unconsciousness treat as per unconsciousness.

## HYPOGLYCEMIA

This condition occurs when the blood sugar level falls below normal. It is characterized by a rapidly deteriorating level of response.

## RECOGNITION

1) The casualty may recognize onset of hypo attack himself.
2) Weakness, faintness or hunger.
3) Confusion and irrational behavior.
4) Sweating with cold and clammy skin.
5) Rapid pulse, palpitations muscle tremors
6) Deteriorating level of response.

## YOUR AIMS

1) To raise sugar content of blood as quickly as possible.
2) To obtain appropriate medical help.
3) If conscious give a sugary drink or chocolate.

## CAUTION

1) If consciousness is impaired, do not give anything by mouth.
2) If the casualty loses unconsciousness, open the airway and check breathing.
3) Monitor vital signs.

## FIRST AID

1) Help the casualty to sit down.
2) Give him sugary drink, or sweet food.
3) Let him rest until he feels better.
4) Monitor and record vital signs – level of response.

## HEART ATTACK

The following information may be helpful in assessing and recognizing chest pain.

### RECOGNITION

### THERE MAY BE

1) Chest pain, spreading to one or both arms, left jaw pain.
2) Breathlessness.
3) Discomfort,
4) Sudden dizziness or faintness.
5) Sudden collapse, with no warning.
6) Casualty may have sense of impending down.
7) Rapid, weak or irregular pulse.
8) Profuse sweating.
9) Extreme gasping for air (air hunger)

### FIRST AID FOR HEART ATTACK

1) Help the casualty into a half-sitting position.
2) Support his head and shoulders and place cushions under knees.
3) Reassure the casualty.
4) Monitor and record vital signs-level of response.
5) Get help, call ambulance.
6) Ask the person takes any chest pain medications for known heart condition, such as Nitroglycerin, Aspirin, and help them to take it.

## STROKE

Stroke occurs commonly in people with high blood pressure (middle age and above). Either a clot or rapture of a blood vessel in the skull cause stroke due to pressure or stopping of blood supply to a part of brain.

### RECOGNITION (REMEMBER F A S T)

1) Assess the casualty.
2) F-Facial weakness, one side of the face does not move as the other side.
3) A-One arm does not move or drifts down when asked to lift – Arm Drift
4) S-Abnormal Speech.
5) Sudden confusion
6) Dizziness, sudden fall.
7) Early admissions to hospital is vital in saving the li9fe. So first aiders should be able to recognize STOKES and refer the casualty to major hospital or stroke centers where future course of action is taken. T-Time-

   Within 3 hours clot Busting should happen

### FIRST AID

1) Reassure and comfort the casualty.
2) If unconscious check for breath, pulse.
3) Be prepare to resuscitate if necessary.
4) Arrange urgent removal to major hospital.

## SEIZURES IN ADULT (FITS)

### RECOGNITON

1) Sudden loss of consciousness often with cry.
2) Rigidity and arching of the back.

3) Shaking his upper and lower limbs.

4) Frothing through the mouth.

5) Unconsciousness.

6) Some people will have an aura (Unusual feeling or Sension before fit).

**FIRST AID**

1) Try to ease the casualty's fall.

2) Clear away any dangerous objects to prevent injury.

3) Clean the froth, turn head one side.

4) Do not restrain the fit.

5) Do not insert anything in the mouth to prevent tongue bite.

6) Monitor vital signs, breathing and pulse.

7) Do not give metal objects into his hands.

8) If casualty unconscious and breathing present Place him recovery position.

## ALLERGY

An allergy is an abnormal reaction of the body's defense system to a normally harmless "trigger" substance. An allergy can present itself as a mild itching, swelling, wheezing or digestive condition, or can progress to full blown anaphylaxis.

**RECOGNITION**

1) Red itchy rash or raised areas of skin

2) Red, itchy eyes.

3) Wheezing and/ or difficulty breathing.

4) Swelling of hands, feet and / or face.

5) Abdominal pain, vomiting and diarrhea.

## YOUR AIMS

1) To ease the severity of the allergic reaction.
2) To seek medical advice if necessary.

## FIRST AID

3) Assess the casualty for signs and symptoms, ask if he has known allergy.
4) Remove the trigger if possible, or move the casualty form the trigger.
5) Treat any symptoms.

## ANAPHYLATIC SHOCK

This is severe allergic reaction affecting the whole body. It may develop within seconds or minutes of contact with a trigger and its potentially fatal.

In anaphylactic reaction, chemicals are released into the blood that widen [dilate] blood vessels.

This causes blood pressure to fall and air passages to narrow [constrict], resulting in breathing difficulties. In addition, the tongue and throat can swell, obstructing airway. The amount of oxygen reaching the vital organs can be severely reduced, causing hypoxia.

## CAUTION

If the casualty loses the consciousness, open the airway and check breathing.

## RECOGNITION

1) Red, itchy, watery eyes;
2) Swelling of hands, feet and / or face;
3) Abdominal pain, vomiting and diarrhea

4) Difficulty in breathing, ranging from right chest to severe difficulty, causing the casualty to wheeze and gasp for air.
5) Pale or flushed skin.
6) Visible swelling of tongue and throat with puffiness around the eyes.
7) Confusion and agitation; signs of shock, leading to collapse and loss of consciousness.

**YOUR AIMS**

1) To ease breathing.
2) Treat for shock.
3) To arrange urgent removal to hospital.

## HEART STROKE

**RECOGNITION**

- Headache, dizziness and discomfort.
- Restlessness and confusion.
- Rapid deterioration in the level of response.
- Hot, flushed and dry skin.
- Full bounding pulse.
- High body temperature.

**YOUR AIMS**

To lower the casualty's body temperature as quickly as possible.

To arrange urgent removal to hospital.

**CAUTION**

If the casualty loses consciousness, open the airway and check breathing.

## FIRST AID

- Quickly move the casualty to a cool place.
- Remove his outer clothing.
- Wrap him in a cold, wet sheet keep the sheet wet by continually pouring cold water.
- Monitor and record vital signs – level of response, breathing, pulse and temperature.

## HEAT EXHAUSTION -SYNCOPE

### RECOGNITION

- Headache, dizziness and confusion.
- Loss of appetite and nausea.
- Sweating, with pale, clammy skin.
- Cramps in the arms, legs or abdomen.
- Rapid, weakening pulse and breathing.

### YOUR AIMS

- To cool the casualty down
- To replace lost body fluids and salts.
- To obtain medical help if necessary.

### FIRST AID

- Get him to lie down and raise and support his legs.
- Monitor and record vital signs – level of response, breathing pulse.
- Give him plenty of water to drink.

## FROST BITE

### RECOGNITION

1) Paleness (pallor) followed by numbness.
2) Hardening and stiffening of the skin.
3) Colour change to the skin affected area.
4) Hot, painful and blistered. Where gangrene occurs.

### YOUR AIMS

1) To warm the affected area slowly to prevent further tissue damage.
2) To arrange transport to hospital.

### CAUTION

1) Do not out the affected part near direct heat.
2) Do not allow the casualty to smoke.

### FIRST AID

1) Advise the casualty to put his hands in his armpits.
2) Avoid rubbing the affected area.
3) Place the affected parts in warm water.
4) Raise the affected limb to reduce swelling.

Transporting sick & injured

| | |
|---|---|
| FOUR HAND SEAT | FOUR HAND SEAT METHOD |
| FIRE MAN'S LIFT | FIRE MAN'S LIFT |
| DRAG METHOD | DRAG METHOD |

## CONTENT OF FIRST AID BOX

| | | |
|---|---|---|
| 1) | Sterilized finger dressing | 10 Nos. |
| 2) | Sterilized foot and hand dressing | 10 Nos. |
| 3) | Sterilized burn dressing small & large | 06 Nos. |
| 4) | Adhesive dressing | 20 Nos. |
| 5) | Roller bandages | 06 Nos. |
| 6) | Triangular bandages | 06 Nos. |
| 7) | Sterilized cotton | 02 Pkts. |
| 8) | Sterilized eye pads | 06 Nos. |
| 9) | Adhesive plaster | 01 No. |
| 10) | S.S. Cream (Silver ex) | 01 No. |
| 11) | Savlon or Dettol | 01 No. |
| 12) | Soframycin ointment | 01 No. |
| 13) | Scissors | 01 No. |
| 14) | Splinters set of 6 nos | 01 Set. |
| 15) | Torch | 01 No. |
| 16) | Safety pins | 01 no. |
| 17) | Mouth – to – mouth resuscitator | 01 No |
| 18) | Writing pad and pen | 01 No |
| 19) | First aid hand book | 01 No |
| 20) | Content of list | 01 No |

**Feedback by the participants regarding the training**

- All the participants rated the Training as very useful
- All the participants' metioned that the hands on experience gave confidence to them
- All the participants mentioned that the training to be conducted periodically
- All the participants mentioned that refresher training is a must

Suggestions for the improvement for the training program given by participants:

- Two participants suggested that to give the training in the local language
- One of the participants suggested having mock drill at the end of the training
- One of the participants suggested to provide soft copy of the training materials to all the participants
- One of the participants suggested to provide training to more teachers

Sharing and dissemination of the First Aid Training at their school

Various participants have expressed their plans in implementing the training at their school which includes

- To hold the awareness training on the important the days such as world health day or first aid day
- Keeping and maintaining the first aid box and forming core group to respond to emergency situations
- By holding the mock drills on fire emergency, which help to identify the gaps

**Pretest-post test**

**( 85 percent increase in the knowledge level is noted from pretest to post test)**

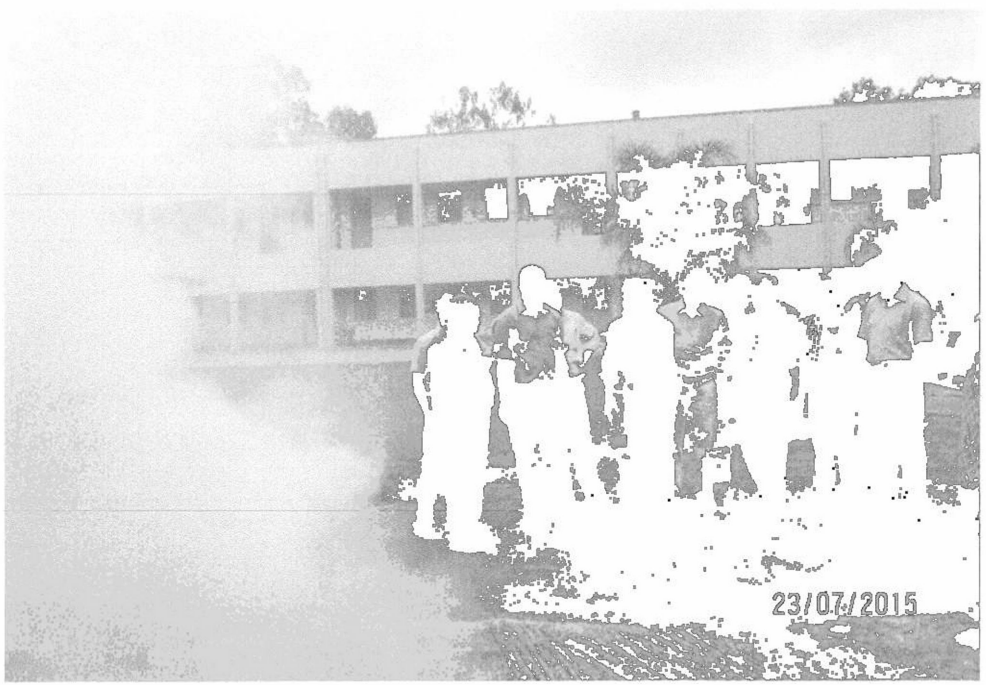
**Coordinators comments:** The training was educative, very useful and was a kind of awareness program. The trainees viewed that such programs are a must for in-service teachers and should be held periodically so that they can be trained under able hands and have meaningful training. First aid can be introduced in curriculum for pre-service teachers.

Demonstration Model School of RIE: Teachers of DMS who underwent training in this program, have successfully developed first aid kits and were able to give first aid to children. Instructions about the first aid kit and the names of teachers to be approached in case of accident were announced in the assembly. Demonstration of SYNCOPE was given in the assembly to build confidence in children.

**Such trainings will ensure parents that their wards are in able, well trained and protective hands.**

# Practical Session and Demonstration Photos


23/07/2015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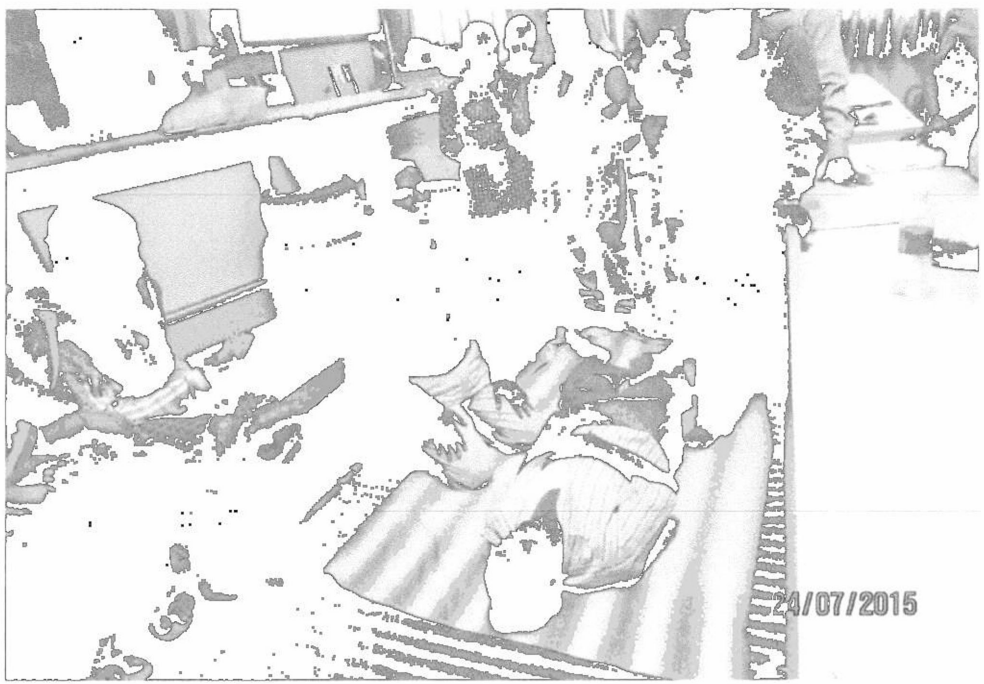
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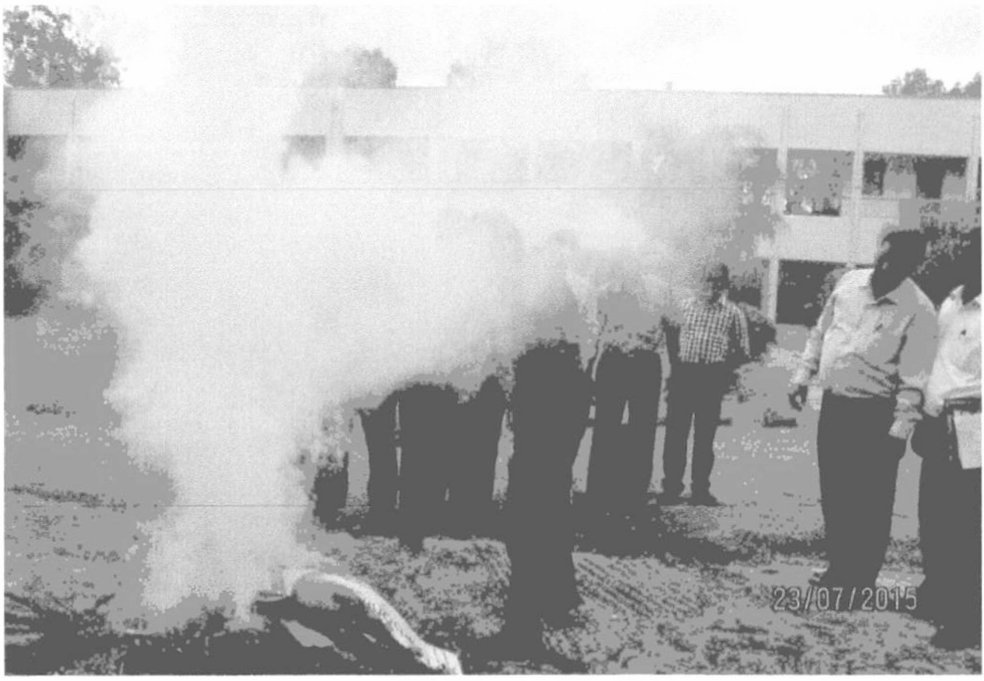
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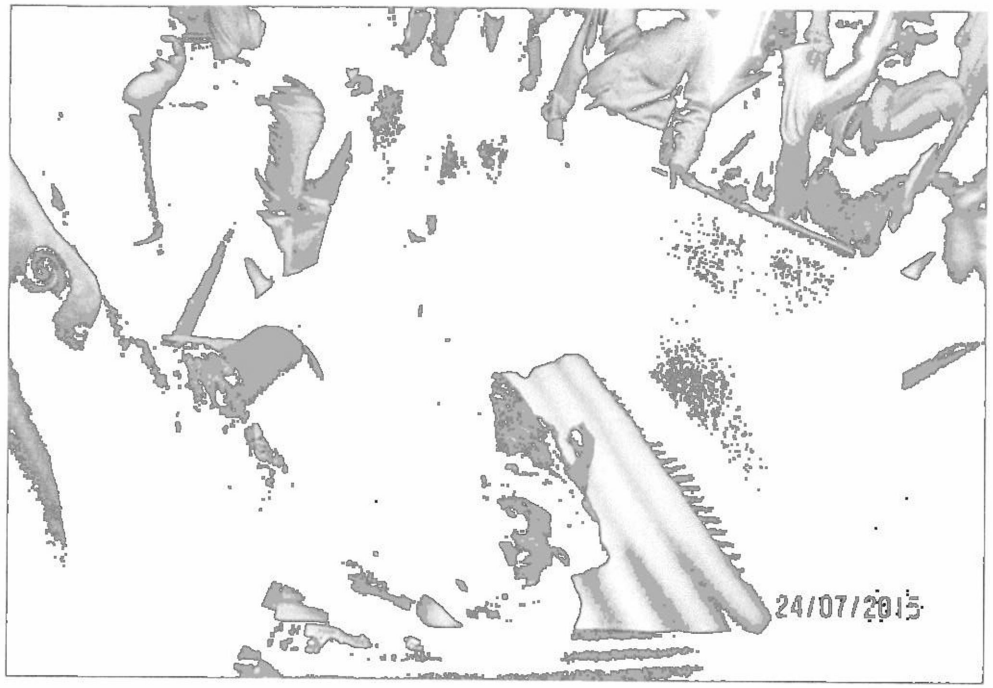
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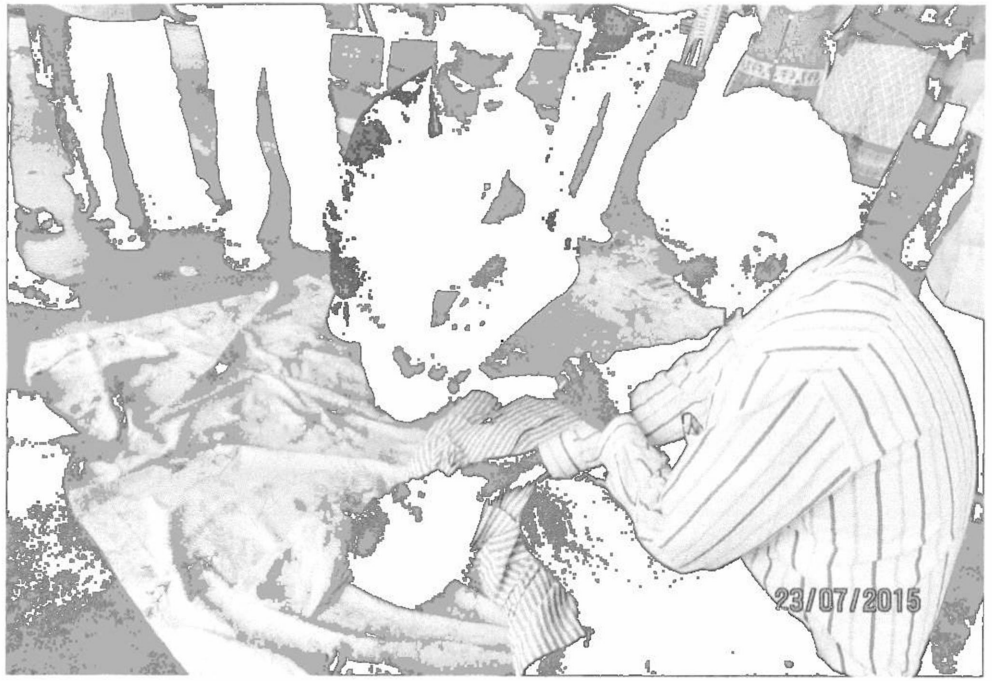
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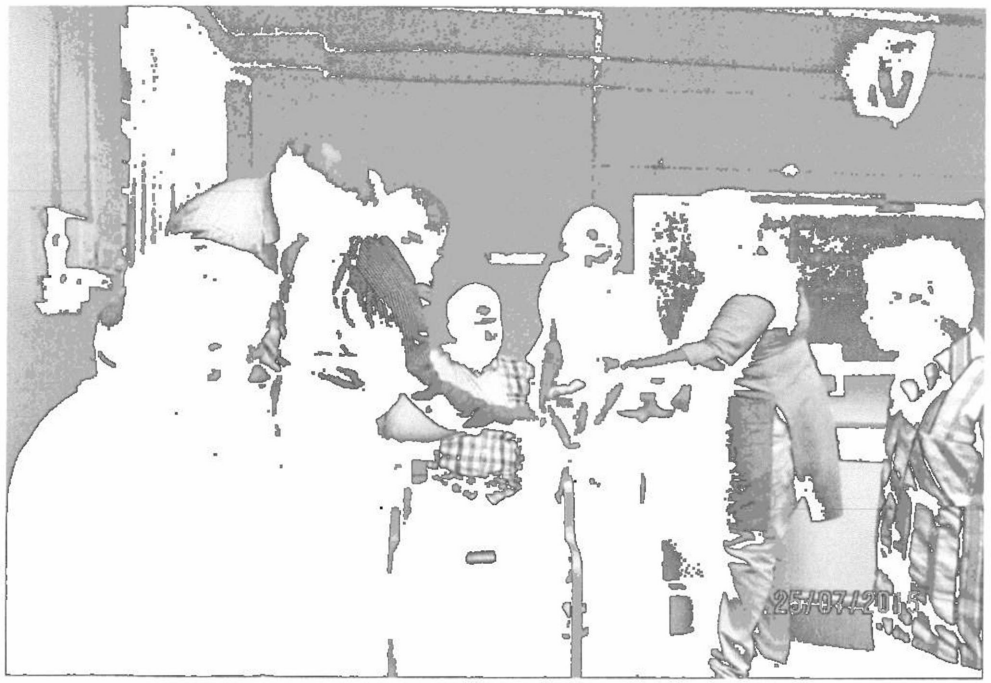
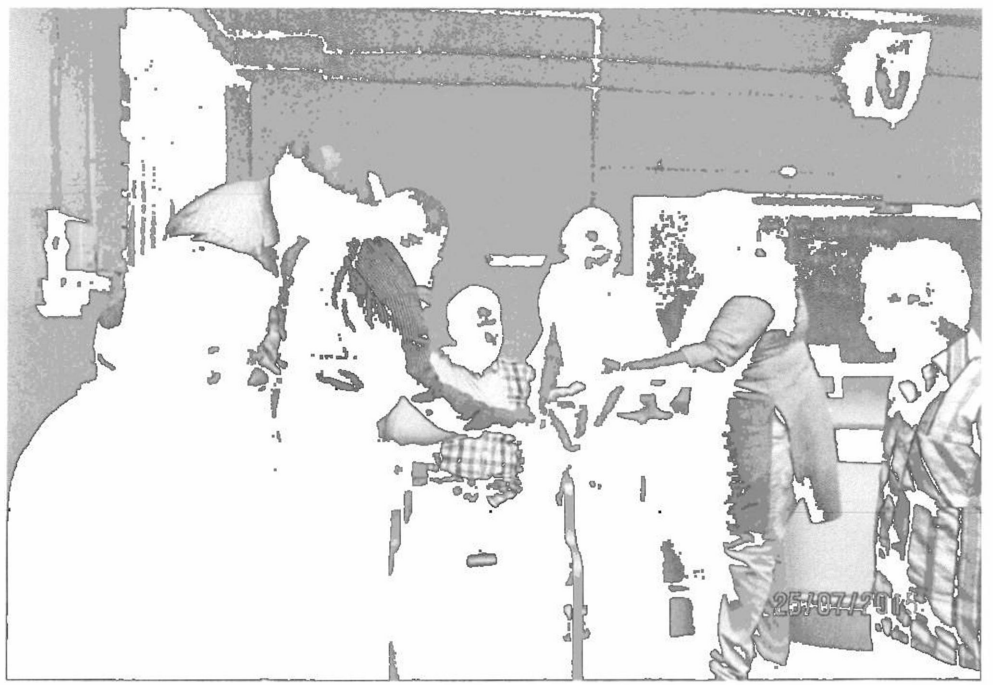




## Photo Session along with our Principal Prof. D.G. RAO of the Participants during the Training Camp

# Report on

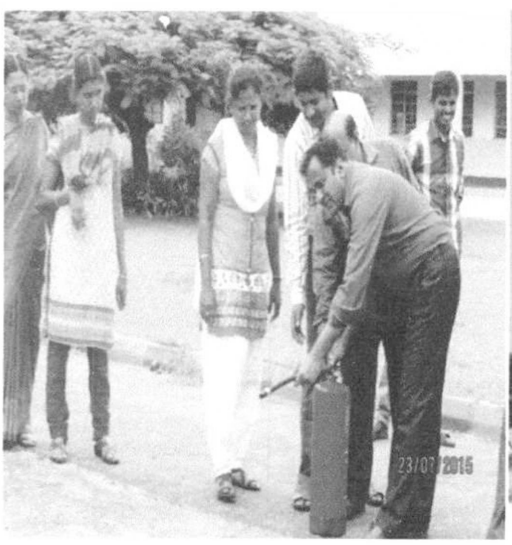
## Training on Emergency Health care (First Aid) for secondary school Teachers of southern States

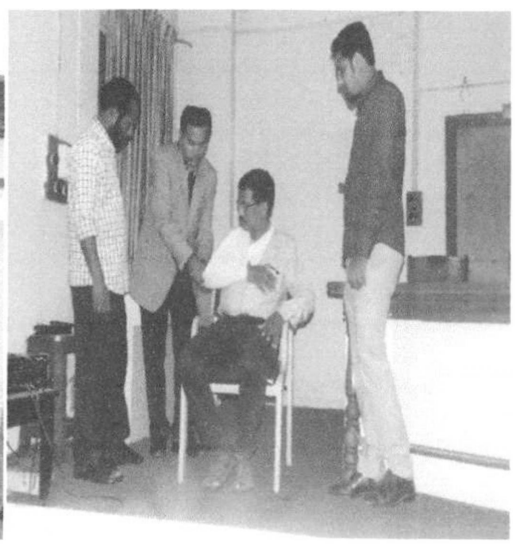
**Held at**

**Regional Institute of Education Mysore. RIE**

**(National Council of Education Research and Training, NCERT)**

**20th to 24 July 2015**



**Co-Ordinator**

**Dr C.PADMAJA**

**Associate Professor in Zoology**

**DESM, RIE, Mysuru.**

## 1.0 Introduction

A step towards the school safety and Need for the workshop

Hon'ble Supreme Court of India has also come out with its judgment in support of schools safety, and insisted on adherence to NBC standards in school building specifications and construction. In its judgment of April13, 2009 on Writ Petition(Civil)no. 483 of 2004, the court has recognized that "Right to education incorporates the provision of safer schools" and given direction on several aspects of school safety including : a) Fire Safety Measures in Schools (Point 3.1 page 23) b) Training of School Teachers and other Staff (Point 3.2 page 25) c) School Building Specifications (Point 3.3 page 27) d) Clearances & Certificates (Point 3.4 page 29). In response to Writ Petition (Civil) no.483 of 2004 , the court held that "Evaluation of structural aspect of the school may be carried out periodically...the concerned engineers and officials must strictly follow the National Building Code. The safety certificate be issued only after proper inspection. Dereliction in duty must attract immediate disciplinary action against the concerned officials.

Access to education is a fundamental right of every child conferred by the Constitution of India. Included as one of the Millennium Development Goals, access to education has been active on the agenda of the Government of India for a long time. As with other infrastructure, schools are also exposed to disaster risk. Disasters have not only challenged the government and other stakeholders in providing access to education but also endangered the lives of children and those engaged in the pursuit of education here have been several instances of children losing their lives or suffering serious injuries due to various natural disasters.

The 2005 Kashmir earthquake resulted in collapse of over 8000 schools on both sides of the

Border; altogether over 18000 children lost their lives while at school (BBC 2005).

A fire led to the death of about 200 children at the prize giving ceremony in at a school in

Dabwali, Haryana in 1995; a total of 31 teachers died and 95 were injured.

During the 2001 Gujarat Earthquake over 11,600 schools were destroyed or damaged; 971 students perished and 1,051 were injured. (World Bank 2001).

Similarly the fire at Lord Krishna School in Kumbakonam, Tamilnadu cost the lives of 94 children.

Soon after thousands of students and teachers were killed, in the 2004 Tsunami.

Key causes for this state of affairs has largely been, poor quality of construction, lack of disaster resilient features and poor maintenance of schools added to this teachers lacking basic training in first aid and handling emergency situations. The fact remains that schools are indeed spaces where children and teachers spend a large part of their day. Therefore the quality of these spaces has a bearing on their vulnerability to disaster risk.

The Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters, adopted at the

World Conference on Disaster Reduction underlines the importance of knowledge and education as one of its five main priorities. It draws attention to school children and youth with the aim of making the community at large more aware of the threat of hazards and become better prepared.

School Safety' has been defined as the creation of safe environments for children starting from their homes to their schools and back. This includes safety from large-scale 'natural' hazards of geological/ climatic origin, human-made risks, pandemics, violence as well as more frequent and smaller-scale fires, transportation and other emergencies, and environmental threats that can adversely affect the lives of children.

The concept has evolved over the last couple of decades as the threat to the physical well being of children is utmost priority both globally and nationally.

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a) Fire Safety Measures in Schools (Point 3.1 page 23)
b) Training of School Teachers and other Staffs on Fire safety and First aid (Point 3.2 page 25)
c) School Building Specifications (Point 3.3 page 27)

d) Clearances & Certificates (Point 3.4 page 29) in response to Writ Petition (Civil) no.483 of 2004.

The court held that "Evaluation of structural aspect of the school may be carried out periodically...the concerned engineers and officials must strictly follow the National Building Code. The safety certificate be issued only after proper inspection. Dereliction in duty must attract immediate disciplinary action against the concerned officials." In addition to policy interest in addressing structural aspects of safety, there have been changes in the school curriculum as well. The SSA, Central Board of Secondary Education (CBSE) and state boards have introduced disaster education in curriculum for school education. The most recent initiative by the government was the National School Safety Project implemented by NDMA in 47 districts of 22 states of the country. The Programme, essentially pilot in nature, had the following components:

http://supremecourtofindia.nic.in/courtnews/2009_is

**Objectives of the Training:**

1) To train teachers to develop skills of life saving procedures in emergency
2) To provide knowledge and skills regarding various First aid Procedures
3) To provide knowledge regarding the various risk the school may pose and preparedness to be done at the school.
4) To train the teachers as a Master Trainers in First aid and Emergency Health care. The participants can conduct the training in their respective school for students and teachers.
5) To train teachers regarding Fire safety and about different methods of operating fire extinguishers
6) To train teachers to maintain a well equipped first aid box in the school

**1.0 Target group /date of training /venue**

Secondary school teachers of south Indian states including, Kerala, Andhra Pradesh, Telangana, Tamil Nadu and Karnataka

Date of the Training - 5 days of training

20th to 24 July 2015

Venue of the training

RIE Campus ,Mysore ,Karnataka

2.0 Program coordinator and Resource person for the Training

Program coordinator :

Dr. C. Padmaja

Department of extension Education

Regional Institute of education (RIE) Mysore

Resource person for the Training:

1) **Dr. Kumar V.L.S**

   **National & South Asia Regional Disaster Team Member**

   **International Trainer on Dis aster Management.**

   **Indian Red Cross Society , National Headquarters**

2) **Dr. Pushpa Latha**

   **Principal**

   **District Training Centre**

   **Health and family welfare Department .Mysore**

   **Government of Karnataka**

## FIRST AID and Emergency Response Training Schedule

**This training will be delivered by the participatory methodologies covering the topics like management of Bleeding,Fratctures,Burn injuries, Drowning , shock, Heartattack, CPR,poisoning, Transportation of the injured and issues related to Disaster Management**

**Day-1**

| Sl. No. | Time | Event | Method |
|---|---|---|---|
| 1 | 8.30 to 9.30 | Breakfast | |
| 2 | 9.30 to 10.00 | Registration | |
| 3 | 10.00 to 10.45 | Inaugural Function:<br>▪ Welcome Address<br>▪ Objective of the camp<br>▪ Introduction of the Participants<br>▪ Pre test | |
| 4. | 10.45 to 11.00 | **Tea Break** | |
| 3. | 11.00 to 13.00 | Principles of First Aid and Role & Responsibilities of a First Aider. Priorities in First aid | Lecture /power point presentation/video show |
| 4. | 13.00 to 14.00 | **Lunch Break** | |
| 5. | 14.00 to 15.45 | Management of Wounds (Bleeding, Bone Fractures. (their types, symptoms and treatments | Demonstration Lecture /power point presentation/video show |
| 6. | 15.45 to 16.00 | **Tea Break** | |
| 7. | 16.00 to 17.00 | Practical on Bleeding and Bandages. Uses of bandages | Group exercise and participatory exercise |

## DAY-2

| Sl. No. | Time | Event | Method |
|---|---|---|---|
| 1. | 9.45 to 11.00 | Management of Fire Emrgency& Accidents. And operation of portable fire extinguishers.<br>First aid For burn injuries | Demonstration Lecture /power point presentation/video show |
| 2. | 11.00 to 11.15 | Tea Break | |
| 3. | 11.15 to 12.00 | Drowning, Rescue First aid management, improvised methods of preparation of Life Jackets | Lecture /power point presentation/video show |
| 4. | 12.00 to 1.00 | Disaster management(preparedness and Response) | Lecture /power point presentation/video show |
| 5. | 1.00-2.00 | Lunch break | |
| 6. | 2 pm -3pm | First aid For electric shock (Rescue & Recovery) | Lecture /power point presentation/video show |
| 7. | 03.15-5.00pm | Group exercise on School Disaster management plan | Group exercise and presentation by the groups |
| 8. | | Evaluation and Day Closure | |

## DAY-3

| Sl. No. | Time | Event | Methods |
|---|---|---|---|
| 1. | 9.30 to 9.45 | Review of Day 3 | |
| 2. | 9.45 to 11.30 | ABC of basic life support.<br>Cardio Pulmonary Resuscitation (CPR)<br>Management of heart attack and Disorders of circulation | Demonstration Lecture /power point presentation/video show |
| 3. | 11.30 to 11.45 | Tea Break | |
| 4. | 11.45 to 13.00 | CPR contd and Recovery position | |
| 5. | 13.00 to 14.00 | Lunch Break | |
| 6. | 14.00 to 15.00 | Management of Mass Casualties (Triage)<br>Different methods of Transportation of the injured<br>Manual and using improvised stretchers | Demonstration |
| 7. | 16.00 to 16.15 | Tea Break | |
| 8. | 16.00 to 17.00 | Improvisation method of FA equipment in times of Emergencies. | |
| 9. | 17.00 | Evaluation and Day Closure | |

## DAY - 04

| Sl. No. | Time | Event | Method |
|---|---|---|---|
| 1. | 9.30 to 9.45 | Review of Day 4 | |
| 2. | 9.45 to 11.30 | Poisoning first aid management | |
| 3. | 11.30 to 11.45 | Tea Break | |
| 4. | 11.45 to 13.15 | Management of snake bite ,dog bite and bee bite | |
| 5. | 13.00 to 14.00 | Lunch Break | |
| 6. | 14.00 to 16.00 | Stretcher Preparation, Transportation and handling of casualty on stretchers (improvisation of stretchers with locally available material) an practical. | |
| 7. | 16.00 to 16.15 | Tea Break | |
| 8. | 16.15 to 17.00 | Management of chocking | |
| 9. | 17.45 to 18.00 | Evaluation and Day Closure | |

## Day-5:

| Sl. No. | Time | Event | Methods |
|---|---|---|---|
| 1. | 8.45 to 9.00 | Review of Day 5 | |
| 2. | 9.15 to 11.00 | First aid management of fits and convulsion | Lecture /presentation |
| 3. | 11.00 to 11.15 | Tea Break | |
| 4. | 11.15 to 13.00 | Written Test , Viva and Practical test | |
| 5. | 13.00 to 14.00 | Lunch Break | |
| 6. | 14.00 to 14.30 | Mock drill videos | Field exercise |
| 7. | 14.30 to 16.00 | Simulation Exercise | |
| 8. | 16.00. to 16.20 | Tea Break | |
| 9. | 16.20 to 16.40 | Training feed back | |

## MATERIALS REQUIRED

- FA – First Aid Kit
- Triangular bandages, Roller Bandages, Crape Bandages,
- Wooden Splints
- Pressure bandages
- Blood stopper(type of Pressure bandage)
- Blanket and Wooden Poles for making stretcher
- Mankin for demonstration of CPR
- Drawing sheets and Marker pen for group execercise
- multimedia projector
- CD or DVD for participants ( videos and presentations of the Sessions)
- First aid Manuals
- Participants evaluation form
- White sheets
- Pre test and post test paper

## Methodology of the Training:

- Lecture and Discussion ( power point)
- Video show
- Demonstration and simulation
- Brain storming sessions and discussions
- Group exercise and participatory exercise
- Hands on Procedures
- Pre test and post test

**Topics covered in the Training**

1) Principles and priorities in First aid
2) Management of wounds bleeding and fractures
3) Management of fire hazards
4) First aid for Burn injuries
5) Transportation of the injured by manual method and using the stretcher
6) TRIAGE mass causality management
7) Management of Drowning
8) Management of Asthmatic situations in schools
9) Management of shock
10) CPR cardio pulmonary Resuscitation of Basic life support
11) Management of electric shock
12) Management of Fits and convulsion
13) Management of chocking
14) Different of methods of Application of Bandages
15) Management of Poisoning
16) Management snake bite

**EMERGENCY PHONE NUMBERS IN INDIA:**

100: Police and emergency help

102: Ambulance

101: Fire service

108: Emergency and disaster management

## CONTENTS



## FIRST AID

First aid is the immediate treatment given to a victim of an accident or sudden illness before the medical aid is obtained. By making use of material that are available on the spot. The person who provides this help is first aider.

### AIM'S OF FIRST AID

1) Preserve life.
2) Prevent condition from deteriorating.
3) Promote early recovery.

### TO PRESERVE LIFE

- AIRWAY: Open and clear.
- BREATHING: - If no Breathing start artificial Respiration.
- CIRCULATION: If no pulse start cardiac compression.

## TO PREVENT THE CONDITION FROM DETERIORATING

1) Dress the wound.
2) Immobilize fracture.
3) Position the casualty.

## TO PROMOTE EARLY RECOVERY

1) Reassure
2) Relieve pain
3) Handle gently. Protect from cold.

## FIRST AIDER RESPONSIBILITY

1) Assess a situation quickly and calmly.
2) Protect yourself and the casualty from danger put yourself at risk.
3) Assess the casualty: - Identify as for you can, the injury or the nature of illness affecting the casualty.
4) Give early treatment and treat the casualties with most serious life threatening condition first.
5) Arrange for appropriate help.
6) Call 108 /102 for emergency, help if suspect serious injury or illness, OR rake or send the casualty to hospital, OR take him to nearby clinic, stay with the casualty until care is available.
7) Stay with the causality till help arrives.

# DRESSIGS AND BANDAGES

## DRESSINGS

Dressing is a protective covering applied over a wound.

## USES OF DRESSINGS

1) To absorb discharges.
2) To prevent infection.
3) To control bleeding.
4) To avoid further injury.

## TYPES OF DRESSINGS

1) Non adhesive dressing.
2) Adhesive dressing.

## NON ADHESIVE DRESSINGS

1) A dressing pad attached to roller bandage.
2) A gauze dressing is made from layers of gauze.

## ADHESIVE DRESSINGS

Example: - Band – Aid, handyplast, Plaster,

Dressing should be always sterile.

## DRESSING CAN BE IMPROVISED FROM

Example: - Clean hand kerchief, linen paper or cellulose tissue.

# BANDAGES

## TYPES OF BANDAGES

Roller bandage.

Triangular bandage

## ROLLER BANDAGE

Triangular bandage

(a) Triangular bandage laid flat

(b) Folded once.

(c) Folded twice – broad fold bandage.

(d) Folded three times – narrow fold bandage

## USES OF BANDAGES

1) Maintain direct pressure over a dressing to control bleeding.
2) Retain dressings, slings and splints in position.
3) Prevent or reduce swelling.
4) Provide support for a limb or joint.
5) Restrict movement.
6) Assist in lifting and carrying casualties.

Bandages should not be used for padding when other materials are available.

## CHEST BANDAGE

## HEAD BANDAGE OR SCALP BANDAGE

## HIP BANDAGE

## HAND BANDAGE

Elbow bandage

Shoulder Bandage

Foot Bandage

## SLINGS

There are three types of slings

1) Arm sling
2) Triangular sling or elevation Sling
3) Cuff and collar sling

## TRIANGUALR SLING

## ARM SLING

## COLLAR & CUFF SLING

## WOUNDS AND BLEEDING

A wound is a break in the continuity of the skin. There will be bleeding from the injured part and it also forms an opening through which germs can get into the body.

| | | |
|---|---|---|
| INCISED WOUND | Lacerated wound | Contused wound |
| Abrasion wound | Punctured wound | Bullet injury |

## TYPES OF WOUNDS

1) Incised 2) Lacerated 3) Contused 4) Abration

### INCISED WOUND

Is caused by sharp instruments like knife, razor etc. The blood vessels are clean cut and so these wounds bleed very much.

### LACERATED WOUND

Is caused by machinery, falls on rough surfaces, claw of animals etc. these wounds have torn and irregular edges and they bleed less.

### CONTUSED WOUND

Is caused by blows by blunt Instruments. The tissues are bruised.

Punctured wound: - Is caused by pointed objects like needles, screwdrivers etc. They have small openings, but may be very deep.

### ABRASION

Superficial Scratch of skin

### COMPLICATIONS OF WOUNDS

1) Bleeding.
2) Infection.

## FIRST AID TREATMENT

1) Wash your hands thoroughly or clean with antiseptic lotion.
2) Make the patient sit or lie down
3) Handle the injured part as gently as possible.
4) Remove any foreign objects like glass, stones etc.
5) Place clean dressing over the wound and bandage firmly.
   This will help to control bleeding and to prevent infection.
6) Seek medical help if necessary.

## BLEEDING (Hemorrhage)

Injuries to the blood vessels cause bleeding.

Bleeding may occur from

1) Arteries
2) Veins
3) Capillaries

## RECOGNITION

### 1) Bleeding from arteries

The blood comes out in jets because it corresponds to heart beats and it is bright red. Arterial bleeding has the highest pressure.

### 2) Bleeding from veins

Venous blood is dark red in colour. Blood flows out in a continuous stream. It is under less pressure than arterial blood.

**3) Bleeding from Capillaries**

Blood oozes out slowly, if it is on the surface of the body may not be serious.

**TYPES OF BLEEDING**

**EXTERNAL AND INTERNAL BLEEDING**

If the bleeding is from the surface of the body it is called external bleeding.

If the bleeding is within chest, skull or abdomen etc. It is called internal bleeding. This cannot be seen immediately but later the blood may ooze out through the nose or ear or coughed up from the lungs, or vomited from the stomach.

## EXTERNAL BLEEDING

**YOUR AIMS**

1) To control bleeding.
2) To prevent and minimize the effect of shock.
3) To minimize infection.
4) To arrange proper disposal.

**CAUTION**

If bleeding is severe it can lead to Shock

***FIRST AID***

## FIRST AID

1) Wash your hands thoroughly or put on disposable gloves.
2) Apply direct pressure over the wound.
3) Raise and support the injured limbs above the level of heart.
4) Handle the injured part as gently as possible.
5) Place clean piece of cloth or sterile dressing.
6) In case of big injuries do not allow the casualty to eat or drink because an anesthetic may be needed later.
7) If the casualty loses consciousness, open the airway and check breathing.

## CAUTION

If bleeding is severe it can lead to shock.

## RECOGNITION OF INTERNAL BLEEDING

1) Rapid, weak pulse
2) Thirst, rapid shallow breathing
3) Confusion, restlessness and irritability
4) Possible collapse and unconsciousness.
5) Information from the casualty that indicates recent injury or illness, pain at the site of injury.

## FIRST AID FOR INTERNAL BLEEDING

1) Lay the casualty down. Raise legs by use of pillows etc.
2) Keep calm and relaxed,
3) Reassure.
4) Do not allow him to move.
5) Keep warm with blankets or coats.

6) Do not give anything by mouth.
7) Do not apply hot or cold pack to chest or abdomen.

## AMPUTATION

A Limb that has been partially or completely severed.

### AIMS

1) To control bleeding.
2) To minimize effects of shock.
3) To arrange urgent removal to hospital. When part is completely severed.

### CAUTION

1) Do not wash the severed part.
2) Do not let the severed part touch the crushed ice when packing it.
3) Do not allow the casualty to eat or drink.

### FIRST AID

1) Control bleeding by applying direct pressure.
2) Raise the injured part above the heart.
3) Apply a Clean pad on the wound and place a sterile dressing.
4) Wrap the severed part in clean gauze or clean cloth then in a plastic cover, and place it in a container full of crushed ice. Mark the container with the time of Injure and the casualty's name.
5) Call ambulance.

## BLEEDING FROM SPECIAL SITES

Bleeding from the base of the skull

As a result of head injury blood and fluid (cerebral-spinal fluid) may flow out of the nose, ear or mouth.

## MANAGEMENT

1) Ask the patient not to blow the nose.
2) Do not pack ear or nose, but place a dressing on ear or nose and strap it in position.
3) Lay the casualty on the affected side.
4) Move the casualty to a hospital immediately.

## BLEEDING FROM THE NOSE

1) Bleeding usually stops within 5-10 minutes.
2) Seat the casualty with head slightly bent downwards.
3) Ask him to breathe through the mouth.
4) Loosen clothing at neck.
5) Pinch the soft part of the nose for 10 minutes.
6) Ask the casualty not to blow his nose for some hours.

## CHEST INJURIES

## COMFORTABLE POSITIONS

Chest injury on one side

Chest injury on both side or abdominal injury

Chest injury

## BREATHING AND ASPHYXIA

### BREATHING

Oxygen is essential to life. Every time we breathe in, air containing oxygen enters the lungs. This oxygen is then transferred to the blood, to be transported around the body. All the cells in the body use this Oxygen and Carbon dioxide, the waste gas enter the blood. This goes to lungs and it throws out during the process of breathing out.

### ASPHYXIA

Asphyxia is a condition in which the lungs do not get sufficient supply of air for breathing. Commonly referred to as suffocation. If this condition continues for some minutes, breathing and heart action stops and death occurs.

### CAUSES

1) Food going down the air passage.
2) Bronchial Asthma
3) Tongue falling back in unconscious patient.
4) Swelling of tissues of the throat
5) Chocking
6) Inhalation of fumes, smoke
7) Severe injury in chest.
8) Strangulation and hanging.

### AIMS AND ACTION

1) To assess the casualty's condition.

2) To identify and remove the cause of the problem and provide fresh air.
3) To comfort and reassure the casualty.
4) To maintain open airway, check breathing and be prepared to resuscitate if necessary.
5) To obtain medical help if necessary.
6) Problems with respiration can be life threatening and need urgent first aid.

**RECOGNITION**

1) Rapid breathing
2) Breathing that is distressed or gasping.
3) Difficulty in speaking
4) Grey-blue skin.
5) Anxiety
6) Restlessness and headache.
7) Nausea and possibly vomiting.
8) Cessation of breathing if the oxygen supply is not restored.

## CHOCKING

A foreign object that is stuck in the throat may block it and cause difficulty in breathing and leads to chocking.

### Heimlich procedure

Towards the head.

## CHEST THRUST

### RECOGNITION

**Obstruction**

Casualty is unable to speak, cough, or breathe, with eventual loss of consciousness.

### AIMS

To remove obstruction.

To arrange urgent removal to hospital if necessary.

### CAUTION

If at any stage the casualty loses consciousness, open the airway check breathing, if not breathing begin

## HANGING AND STRANGULATION

If pressure is exerted on the outside of the neck, the airway is squeezed and the flow of air to the lungs will be cut off.

The main causes of such pressure are

### HANGING

Suspension of the body by a noose around the neck

### STRANGULATION

Constriction or squeezing around the neck or throat.

### RECGNITION

A constricting article around the neck.

Marks around the casualty's neck.

Rapid, difficult breathing; impaired consciousness; grey-blue skin.

Congestion of the face, with prominent veins and, possibly, tiny red spots on the face or on the whites of the eyes.

**AIMS**

1) To restore adequate breathing.
2) To arrange urgent removal to hospital.

**FIRST AID**

1) Do not move the casualty unnecessarily.
2) Do not destroy or interfere with any material that has been constricting the neck, such as knotted rope. Police may need it as evidence.
3) If the casualty is unconscious, open the airway check breathing.

## DROWNING

**Drowning can result in**

Spasm of the throat due to entry of water into the airways which causes the airway to become too narrow. It can also lower the body temperature to low levels, which can be dangerous. Which may leads to sudden cardiac arrest.

**AIMS**

1) To restore adequate breathing.
2) To keep casualty warm.
3) To arrange urgent removal to hospital.

## CAUTION

1) If the casualty is unconscious, open the airway and check breathing.
2) If the casualty not breathing give rescue breaths.
3) Be prepared to resuscitate.

## SHOCK

This life threatening condition occurs when the circulatory system (which distributes oxygen to the body tissues and removes waste product) fails and, as a result, vital organs such as the heart and brain are deprived of oxygen. It requires immediate emergency treatment. Shock can be made worse by fear and pain.

## RECOGNITON

1) Pale, cold, clammy skin.
2) Sweating.

### As shock develops

1) Rapid, shallow breathing.
2) A rapid, weak or threaddy pulse.
3) Grey-blue skin(cyanosis)
4) Weakness and dizziness.
5) Nausea and possibly vomiting. Thirst
6) Restlessness and aggressiveness
7) Yawning and gasping for air.
8) Unconsciousness
9) Finally, the heart may stop.

## CAUSES

1) Severe bleeding. as in severe external and internal injuries.
2) Severe burns
3) Severe fluid loss. (example:- severe vomiting and or loose motion)
4) Severe infection in the blood.(Septicaemia)

## AIMS

1) To recognize shock
2) To treat obvious cause of shock
3) To improve blood supply to the brain, heart and lungs.
4) To arrange urgent removal to hospital.

## CAUTION

1) Do not allow the casualty to eat or drink
2) Do not leave the casualty un attended, unless you have to call ambulance.
3) Do not warm the casualty with hot water bottle.
4) If the casualty loses consciousness, open the airway and check breathing.

## FIRST AID

1) Lay the casualty down. Raise legs by use of pillows etc.
2) Keep him calm and relaxed.
3) Reassure
4) Do not allow him to move.
5) Keep warm with blankets or coats.
6) Do not give anything by mouth
7) Do not apply hot pack or rub the hands or feet.

8) Do not leave the casualty un attended, unless you have to call ambulance.
9) If the casualty loses consciousness, open the airway and check breathing.

## FRACTURES

A fracture is a break, crack or bend in the bone.

### CAUSES OF FRACTURES

Generally force of sufficient strength causes break in the bone.

Force can act directly or indirectly.

### DIRECT FORCE

When bone breaks at the point of application of force it is known as fracture causes by direct force.

### INDIRECT FORCE

When it breaks away from the point of application of force it is called as fracture caused by indirect force.

### TYPES OF FRACTURES

1) Simple fracture. (Closed fracture)
2) Compound fracture (Open fracture)
3) Complicated fracture.

### RECOGNITION

1) Pain experienced by casualty.
2) Pain on gentle touch or pressure. (Tenderness)
3) Swelling.