



First Aid and Emergency Care

Introduction:

In India, several National Health Programs have been directed at promoting healthy lifestyles of the general people to prevent illness and disease. First aid education should be a central part of these health programs, teaching skills that can prevent an illness or accident inflicting serious injury, or resulting in a fatality.

If we are serious about preventing unnecessary injury and death, then we need to ensure that people have basic first aid knowledge. By starting to teach first aid in all sectors, we can help people prevent serious injury and death in their communities today.

First aid to the wounded and the sick is what light is to the one confronted with darkness. Mahatma Gandhi whom we all fondly refer to as Father of the Nation led a dedicated band of Ambulance Corps Volunteers in 1906 at the time of Zulu Rebellion and earlier in 1899 at the time of Boer War in South Africa. It will be worth mentioning that Gandhiji himself carried the wounded General Buller to the Base Hospital.

Definition:

First Aid is the first Assistance or treatment given to a casualty for an injury or sudden illness before the arrival of an ambulance or qualified medical expert. It is the assistance provided by a First Aider for preserving life and health, alleviating suffering, providing psychological support and preventing long term disability before the arrival of/hand over to the Emergency Care/Health Service.

Scopes of First Aid:

The 3(three) scopes of first aid are to:

- I. TO PRESERVE LIFE:** A first aider can preserve the life of a casualty by way of taking up the following vital actions-
 1. Maintain an open Airway by positioning the casualty correctly
 2. Begin resuscitation if the casualty is not breathing, & heart is not beating and continue treatment until skilled medical aid is available
 3. Control bleeding

II. TO PREVENT THE CONDITION WORSENING

1. Dressing wounds provide comfortable support for any large wounds and fractures
2. Place the casualty in comfortable position consistent with the requirements or treatment.

III. TO PROMOTE RECOVERY

1. Relieve the casualty of anxiety & encourage confidence
2. Relieve the casualty of pain & discomfort
3. Handle the casualty gently
4. Protect the casualty from cold & heat

Calling for Help:

According to the severity of the casualty, first aider may have to seek emergency help. While making the call, one should state clearly their name and provide the following:

- Telephone number
- The exact location of the incident, road/street sign, landmarks in the area;
- The type and gravity of the incident;
- Number, gender and age of the casualties;
- Details of any hazards such as gas, toxic substances, power-line damage, or adverse weather conditions like rain, fog, wind etc.

When the Emergency Services arrive, first aider must share the details of the casualty and the incident/illness with the Emergency Care Providers and follow the proposals/instructions made by them.

Responsibility of a first aider:

Prior to any engagement in action, the First Aider must survey/assess the emergency situation (danger related issues) which threaten or may affect him/her, the casualty and bystanders. Protection from danger and possible reoccurrences should be the first and permanent concern of the First Aider. However there might be situations, where the First Aider cannot protect the casualty from danger that requires rescue to be done by Special Forces, like police, special rescue or fire brigade.

In short, the main responsibilities of the First Aider in the management of a casualty are to:

1. Assess the situation without endangering one own's life.
2. Identify the disease or condition from which the casualty is suffering (diagnosis).
3. Give immediate, appropriate & adequate treatment, bearing in mind that a casualty may have more than one injury and that some casualties will require more urgent attention than others.
4. Arrange, without delay, for disposal of the casualty to a Doctor, hospital or emergency care service according to the seriousness of the casualty.

Life Threatening Priorities

The important organ of the human body the brain coordinates the different activities of the different parts of the body. For this, the brain needs oxygen which is supplied through the process of respiration or breathing. The brain cannot function without oxygen for more than 3 minutes.

Hence, the priority is to maintain an open AIRWAY in any casualty, BREATHING and CIRCULATION/ control of severe bleeding so that oxygen is supplied to the brain and other vital organs. It is easier to remember as ABC.

When dealing with an unconscious casualty one should open and maintain their airway as their first priority.

If the casualty is breathing, the simple procedure of placing the casualty in to the recovery position should ensure that the airway will remain clear of obstructions.

If the casualty has stopped breathing one can assist them by performing CPR (Cardio Pulmonary Resuscitation)- a combination of chest compressions and rescue breaths. One breathes out enough oxygen to potentially keep the casualty alive until the emergency services arrive, the oxygen one breathes into the casualty will need to be pumped around the body using chest compressions.

It is important to remember that in any life threatening situation the emergency services should be called as soon as breathing or absence of breathing has been identified.

Sports Injuries:

Playing sport and doing regular exercise is good for your health, but can sometimes result in injuries. Sports injuries can also be caused by an accident, not warming up properly before exercising and using inadequate equipment or poor technique. Traumatic injuries account for most injuries in contact sports and collisions with the ground, objects, and other players are common, and unexpected dynamic forces on limbs and joints can cause injury.

1. Wounds and bleeding:

If the wound is minor, the aim of the first aider is to prevent infection. Severe wounds may be very daunting to deal with but the aim is to prevent further blood loss and minimize the shock that could result from the bleeding.

Aim of First Aid

1. Complications must be prevented or minimized.
2. The location and extent of a wound must be carefully assessed.

Treatment of minor external wounds:

1. Wash and dry hands.
2. Cover any cuts and put on disposable gloves.
3. Clean the cut, if dirty, under running water.

4. Cover the cut completely with a sterile dressing or plaster.

Treatment of external bleeding wounds:

1. Have the injured person lie down. This position reduces the risk of fainting by increasing blood flow to the brain. If possible, elevate the site of bleeding.
2. While wearing gloves, remove any obvious dirt or debris from the wound.
3. Apply pressure directly on the wound using a sterile bandage, clean cloth or even a piece of clothing. If nothing else is available, one can use one's own hand.
4. Cover the wound with a gauze or bandage.
5. Check frequently if the fingers or toes remain warm. If cold, loosen.
6. Treat for shock, if any.
7. Dial for an ambulance and refer to a health centre.

Treatment of Internal Bleeding wounds: When bleeding occurs inside the body, the blood will, sometimes, leak from inside the body through natural openings such as the nose, ear, stool, urine, vomit or birth canal. Other times the blood stays inside the body causing pain & shock.

- A. **Nose bleed:** Bleeding from the nose most commonly occurs when tiny blood vessels inside the nostrils are ruptured, either by a blow to the nose, or as a result of sneezing, picking or blowing the nose. Nosebleeds may also occur as a result of high blood pressure.

Your aims

1. To control blood loss.
2. To maintain an open airway.

Treatment

1. Ask the casualty to sit down.
2. Advise them to tilt their head forwards to allow the blood to drain from the nostrils.
3. Ask the casualty to pinch the soft part of the nose.
4. Advise them not to speak, swallow, cough, spit or sniff because this may disturb blood clots that may have formed in the nose.
5. After 10 minutes, tell the casualty to release the pressure. If the bleeding has not stopped, tell her to reapply the pressure for two further periods of 10 minutes.
6. Advise the casualty to rest quietly for a few hours. Tell them to avoid exertion and in particular, not to blow their nose, because these actions will disturb any clots.

B. Bleeding from ear

1. Ask the person to sit or lie down, tilt the head so the bleeding ear is down
2. Wash the hands
3. Bandage the ear lightly (don't poke the ear)

Note: If there is a little bleeding from outside the ear no need to refer but bleeding from inside the ear he should be referred. Passing blood in the stool, urine, vomit, cough etc should be referred to Health Centre

2. Musculo- skeletal Problems:

The skeleton is the hard framework around which the body is constructed and supports the muscles, blood vessels and nerves and protects organs such as the brain and heart. It is joined in many places and muscles attached to the bones enable them to move. Most of these movements are controlled at will and coordinated by impulses sent from the brain via the nerves to every muscle and joint in the body.

A. Fractures: a fracture is the partial/complete bend, crack or breakage of a bone caused by a direct or indirect force to the bone. When direct force is applied the bone breaks at the point of application of the force.

Recognition features:

- Feels pain when try to move the injured part
- Feels pain when one gently presses the injured part
- Cannot move the injured part at all
- Has swelling or a change in the shape of the body where there is pain
- Shortening, bending or twisting of a limb and bruising at the fracture site
- A wound with bone ends protruding (open fracture)

Aim of giving first aid:

- To prevent movement at the injury site
- To arrange removal to hospital with comfortable support
- To prevent blood loss, movement and infection at the site of injury.

B. Dislocations: a dislocation is the displacement of one bone or more bones at a joint. This can be caused by a strong force displacing the bone into an abnormal position or by violent muscle contraction.

Recognition features:

- Severe pain at or near the joint
- Cannot move the joint
- Deformity, shortening or bending of the joint and unnatural position

- Swelling and bruising around the affected joint

Aim of First Aid:

- To prevent movement at the injury site
- To arrange removal to hospital with comfortable support.

C. Sprains and Strains: the softer structures around the bones and joints –ligaments, muscles, and tendons –can be injured in several ways. When muscles and tendons are torn or ruptured it is a strain and is invariably accompanied by bleeding into the surrounding tissues, leading to pain, swelling and bruising.

Sprain is the injury to the ligaments holding the joints.

Recognition features:

- Pain and tenderness
- Difficulty in moving the injured part
- Swelling and bruising
- Deformity at the site of injury.

Aim of First aid;

- To reduce the pain
- To obtain medical help if necessary.

First Aid: Sprains and Strains could be treated initially by the “RICE” procedure:

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| R | - | Resting the injured part |
| I | - | Ice pack or cold padding be applied |
| C | - | Comfortable support be provided |
| E | - | Elevate the injured part. |

Emergency Care Service:

It is an organization and groups with a system or a network of resources and personnel having a specific responsibility to prepare for and respond to emergency situations. Its members are qualified to intervene directly at an incident or to take over the management of a casualty who has been initially assisted by a bystander and/or a First Aider on the scene. This responsibility is legally established by the local authorities and accepted/recognized by the community and casualties. Assistance provided by an emergency care service may be in the form of:

1. Training/education service in prevention of, preparation for, response to emergency situations;
2. Direct attendance at all scene of emergency situation for risk control, rescue and/or emergency care provision;
3. Verbal or written advice and guidance to a casualty, bystander or a First Aider at the scene;

4. Provision of transport for the casualty;
5. Care in a Health Centre which is able to receive a casualty.

Incident Management:

Incidents, accidents or emergencies may happen anywhere and anytime be it at home, road, community, educational areas, sports arena, religious or work places. The site of any such situation may be with many potential dangers or risks for the first aiders, casualties and bystanders. Hence, before commencing any first aid intervention it is imperative to protect yourself from possible dangers, make the area safe, have a primary assessment of the situation, call for help, provide suitable treatment and if necessary arrange for early removal of the casualty to the appropriate health facility.

Recognition of the existence of an emergency: one will realize that an Emergency has occurred only if they are aware of unusual sounds/noises, sights, smell and behaviours.

Conclusion:

In many health emergencies, interventions in the first few minutes, before the emergency services arrive, can make a crucial difference to the outcome for the casualty. Teaching people first aid skills is core to addressing the unacceptable situation where many people die each year when immediate first aid could have given them a chance to live.

The ready availability of trained first aiders can be the difference between a life lost and a life saved.