

INTRODUCTION TO FIRST AID

Ms.Kogilavani
Lecturer in MSN Dept,
ICON

DEFINITION

- **First aid** is the first and immediate assistance given to any person with either a minor or serious illness or injury, with care provided to preserve life, prevent the condition from worsening, or to promote recovery.

Aims

- o The primary goal of first aid is to prevent death or serious injury from worsening.
- o **Preserve life:** The overriding aim of all medical care which includes first aid, is to save lives and minimize the threat of death. First aid done correctly should help reduce the patient's level of pain and calm them down during the evaluation and treatment process.
- o **Prevent further harm:** Prevention of further harm includes addressing both external factors, such as moving a patient away from any cause of harm, and applying first aid techniques to prevent worsening of the condition, such as applying pressure to stop a bleed becoming dangerous.
- o **Promote recovery:** First aid also involves trying to start the recovery process from the illness or injury, and in some cases might involve completing a treatment, such as in the case of applying a plaster to a small wound.



Principles of first aid

- **Preserve life:**
 - Airway
 - Breathing
 - Circulation
- **Prevent deterioration:**
 - Stop bleeding
 - Treat shock
 - Treat other injuries
- **Promote recovery:**
 - Reassure
 - Relieve pain
 - Handle with care
 - Protect from harm

Six principles of First Aid

1. Keep calm during an emergency situation.
2. Avoid infection.
3. Act as a first aider.
4. Ensure the comfort of the ill or injured person.
5. Give psychosocial first aid.
6. Emotional reactions afterwards might occur.



GOLDEN RULES OF FIRST AID

- o Do the first thing first; this includes assessing the situation for any immediate danger, quickly and methodically without panicking, giving priority to the most urgent situation / condition.
- o Remove the victim from the cause of injury or the cause of injury from the victim.
- o Resuscitate the victim, if necessary and carry out general treatment of unconsciousness.
- o Loosen all tight clothing or materials around the victim's neck waist, wrist, etc.
- o Arrest bleeding, cover all wounds, burns or scalds and immobilize all fractures.
- o Do not allow people to crowd a victim and do not move a victim unless you really have to (dangerous environment, risk of falling debris, explosion etc)
- o Reassure the victim and get help as soon as possible
- o Improvise all necessary materials, which are not readily available.
- o Guide against or treat for shock
- o Dispose/transport the victim properly.

Qualities and task of first aider

- First-Aiders must always remain calm and assess the situation first before rushing to help the victim.
- 2. First Aiders must ensure to remove any dangers from the casualty, or remove the casualty from dangers, and prevent the crowding of casualties by bystanders.
- 3. It is important that the First-Aiders -call for appropriate help as per the assessment of the situation.
- 4. As most first aid treatment does involve touching the victim, it is very important that the First-Aider gains their permission, so as to avoid causing offence or distress.
- 5. It is important to understand that first aid has its limitations and does not take the place of professional medical treatment.
- 6. First Aiders should also take care to listen to any remarks or requests a casualty makes.
- 7. The First Aider's responsibility ends when the casualty is handed over to the care of a competent health provider.

A damage assessment survey :

- o **Look:** Make a thorough visual inspection of the damage-affected area;
- o **Listen** to all sources of information - the community, government records, and media reports;
- o **Understand** the gravity of the dangers and the suffering of victims as well as the capacity to respond.

o The first actions by First Aiders:

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- o D - Danger assessment for self and victim
- o R - Responsiveness of the victim
- o C - Check and assess for pulse
- o A - Assess and ensure clear airway
- o B - Check if person is breathing

First Aid Kit

A **first aid kit** is a collection of supplies and equipment that is used to give medical treatment. There is a wide variation in the contents of first aid kits based on the knowledge and experience of those putting it together, the differing first aid requirements of the area where it may be used, and variations in legislation or regulation in a given area.

First-aid kits: Basic supplies



- o The international standard for first aid kits is that they should be identified with the ISO graphical symbol for first aid (from ISO 7010), which is an equal white cross on a green background.
- o Standard kits often come in durable plastic boxes, fabric pouches or in wall mounted cabinets. The type of container will vary depending on the purpose, and they range in size from wallet-sized through to a large box. It is recommended that all kits are kept in a clean dust- and damp-proof container to keep the contents safe and aseptic.

Airway, Breathing and Circulation

- First aid treats the ABCs as the foundation of good treatment. For this reason, most modern commercial first aid kits (although not necessarily those assembled at home) will contain a suitable infection barrier for performing artificial respiration as part of cardiopulmonary resuscitation, examples include:
 - Pocket mask
 - Face shield

Advanced first aid kits may also contain items such as:

- Oropharyngeal airway
- Nasopharyngeal airway
- Bag valve mask
- Manual aspirator or suction unit
- Sphygmomanometer (blood pressure cuff)
- Stethoscope



Common Items

- o Common kits may contain:
- o Thermometer
- o Adhesive dressings
- o Antiseptic solution
- o Bandages
- o Cotton balls or swabs
- o Emergency blanket
- o Gauze
- o Gloves
- o Hand sanitizer
- o Ice pack
- o Saline
- o Tweezers



Trauma injuries

- o Trauma injuries, such as bleeding, bone fractures or burns, are usually the main focus of most first aid kits, with items such as bandages and dressings being found in the vast majority of all kits.
- o **Adhesive bandages** (band-aids, sticking plasters) - can include ones shaped for particular body parts, such as knuckles
 - o Moleskin - for blister treatment and prevention
- o **Dressings** (sterile, applied directly to the wound)
 - o Sterile eye pads
 - o Sterile gauze pads
 - o Sterile non-adherent pads, containing a non-stick teflon layer
 - o Petrolatum gauze pads, used as an occlusive (air-tight) dressing for sucking chest wounds, as well as a non-stick dressing

- o **Bandages** (for securing dressings, not necessarily sterile)
 - o Gauze roller bandages – absorbent, breathable, and often elastic
 - o Elastic bandages – used for sprains, and pressure bandages
 - o Adhesive, elastic roller bandages (commonly called 'Vet wrap') – very effective pressure bandages and durable, waterproof bandaging
 - o Triangular bandages – used as slings, tourniquets, to tie splints, and many other uses
- o **Butterfly closure strips** – used like stitches to close wounds, usually only included for higher level response as can seal in infection in uncleaned wounds.
- o **Saline** – used for cleaning wounds or washing out foreign bodies from eyes

- o **Soap** – used with water to clean superficial wounds once bleeding is stopped
- o Antiseptic wipes or sprays for reducing the risk of infection in abrasions or around wounds. Dirty wounds must be cleaned for antiseptics to be effective.
- o **Burn dressing**, which is usually a sterile pad soaked in a cooling gel
- o **Adhesive tape**, hypoallergenic
- o **Hemostatic** agents may be included in first aid kits, especially military or tactical kits, to promote clotting for severe bleeding.

Personal protective equipment

- o A waterproof Pelican first aid kit.
- o The use of personal protective equipment or PPE will vary by the kit, depending on its use and anticipated risk of infection. The adjuncts to artificial respiration are covered above, but other common infection control PPE includes:
- o Gloves which are single-use and disposable to prevent cross infection
- o Goggles or other eye protection
- o Surgical mask or N95 mask to reduce the possibility of airborne infection transmission (sometimes placed on patient instead of caregivers. For this purpose the mask should not have an exhale valve)
- o Apron

Instruments and equipment

- o Trauma shears for cutting clothing and general use
- o Scissors are less useful but often included (usually to cut medical equipment off or smaller)
- o Tweezers, for removing splinters, amongst others.
- o Lighter for sanitizing tweezers or pliers etc.
- o Alcohol pads for sanitizing equipment, or unbroken skin. This is sometimes used to debride wounds, however some training authorities advise against this as it may kill cells which bacteria can then feed on
- o Irrigation syringe – with catheter tip for cleaning wounds with sterile water, saline solution, or a weak iodine solution. The stream of liquid flushes out particles of dirt and debris.
- o Torch (also known as a flashlight)
- o Instant-acting chemical cold packs
- o Alcohol rub (hand sanitizer) or antiseptic hand wipes
- o Thermometer
- o Space blanket (lightweight plastic foil blanket, also known as "emergency blanket")
- o Penlight
- o Cotton swab
- o Cotton wool, for applying antiseptic lotions.
- o Safety pins, for pinning bandages.

Medication

Life saving

- o Aspirin primarily used for central medical chest pain as an anti-platelet
- o Epinephrine autoinjector (brand name EpiPen) – often included in kits for wilderness use and in places such as summer camps, to temporarily reduce airway swelling in the event of anaphylactic shock.
- o Diphenhydramine (brand name Benadryl) – Used to treat or prevent anaphylactic shock.

CONCEPT OF EMERGENCY

An **emergency** is a situation demanding immediate action.

- o Airway
- o Breathing
- o Circulation
- o the presence of an urgent situation defying his usual standards for affect, conduct, or experience;
- o the failure of his psychosocial network to circumscribe or to ameliorate the crisis; and
- o the convenience and immediate accessibility of the emergency service.