The Aims of First Aid

The aims of first aid (the three Ps) are to:

- **Preserve** the casualty’s life.
- **Prevent** worsening of the condition.
- **Promote** the casualty’s recovery.

Emergency Aid

Emergency aid depends on the ABC of life:

- **Airway** — must be open so oxygen can enter the body.
- **Breathing** — must take place so oxygen can enter the bloodstream via the lungs.
- **Circulation** — heart must beat to ensure blood travels around the body and is not lost through the result of injury.

The initial assessment of the casualty consists of:

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<th>AIRWAY</th>
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Remember this as Dr ABC!

Recovery Position

All unconscious casualties must be placed in the recovery position. This is to:

- **Stop the tongue from blocking the throat.**
- **Allow fluid to drain from the mouth and reduce the risk of inhaling stomach contents.**

The aim is to keep head, neck and back aligned, while bent limbs keep the body propped in a comfortable and secure position. If you are forced to leave the casualty, the recovery position will minimise the risks.

**Beware of neck or spinal injury. Take more care and use extra help if this is suspected.**
RESUSCITATION

Mouth to Mouth Ventilation
Air breathed in contains 21% oxygen and air breathed out contains 16% oxygen. This is sufficient to ensure that the cells of the body, especially the brain, obtain sufficient oxygen to stay alive when air is blown into the casualty’s lungs.

1. Carry out initial assessment as far as breathing check.
2. Close the casualty’s nose by pinching it, and seal around casualty’s mouth with your lips.
3. Blow into casualty’s mouth for two seconds until chest rises, maintaining jaw lift/head tilt and nose seal.

Cardio-Pulmonary Resuscitation
If there is no pulse this indicates that the heart is not beating. Oxygen which is air breathed into the lungs cannot be circulated around the body and to the brain cells in particular unless the heart is able to pump the oxygenated blood around the body. You will have to provide an artificial circulation by means of chest compressions. Chest compressions must be combined with mouth to mouth ventilation to maintain both the circulation and the supply of oxygen to the brain.

1. If no pulse, locate one of the lower ribs with two fingers, move fingers to where the ribs meet the breastbone.
2. Place fingers on the lower breastbone with the heel of the other hand immediately above the two fingers and in the centre of the chest (‘landmark’ the exact position for next time).
3. Place the heel of the first hand over the other hand with fingers of both hands interlocked.
4. Lean well over the casualty, arms straight and elbows locked, and press down 4 – 5 cms.
5. Without removing your hands compress the chest 15 times at the rate of 100 compressions per minute for 8 – 9 seconds.
6. Give two breaths of mouth to mouth ventilation

Getting Help
The rules for deciding when to leave your casualty and get help depend on whether you have someone to help or are alone, and whether the absence of breathing is due to injury or drowning, or some other condition such as a heart attack. If breathing/pulse fails as a result of a heart attack the one single factor which will save the casualty is the early arrival of an ambulance with a defibrillator preferably within eight minutes. In these circumstances get help on the way as soon as it is detected that there is no breathing.
STOPPING BLEEDING, HOW TO APPLY A DRESSING AND TREATMENT FOR SHOCK, CUTS AND GRAZES

Severe Bleeding

1. Apply direct pressure to control the bleeding by pressing with fingers or the palm of the hand on the wound. Press over a clean dressing if one is immediately available.

2. Raise and support the injured part — if the wound is on a limb and you do not suspect a fracture.

3. Place a sterile or clean dressing over the wound. Ensure that it is large enough to extend well beyond the edges of the wound. Press down firmly and secure with the bandage attached to the dressing or with a separate bandage.

4. Tie the bandage firmly enough to control the bleeding, but not so tight as to cut off circulation.

5. Raise and support the injured part — put an injured arm into an elevation sling, or improvise.

6. If bleeding continues, apply up to two more dressings on top of the original one and bandage firmly. Do not remove dressings once applied.

7. Treat for shock.
   
   If no sterile dressing is available, improvise with any suitable material.

Indirect Pressure
Indirect pressure must be applied only in the very exceptional case of an injury to a limb where direct pressure is not possible or effective. It is applied to the main artery which supplies the limb and should be attempted only when the technique has been properly taught.

   Do not apply indirect pressure for more than 10 minutes.

   Do not apply a tourniquet.

Embedded Foreign Body
Never attempt to remove a large foreign body embedded in a wound. The treatment is modified as follows:

1. Apply direct pressure by squeezing the sides of the wound together alongside the foreign body.

2. Raise and support the affected limb.

3. Place a piece of gauze or other dressing over and around the foreign body.

4. Place pads of cotton wool or other material around the foreign body until high enough to prevent any pressure on it.
5. Secure with a firm bandage.
6. Treat for shock.

**Treatment for Shock**

Shock is a serious condition which may prove fatal. It is caused when the pressure or volume of circulating blood falls. This happens when the heart pump fails so that the pressure of the circulating blood becomes weak. It also happens when the volume of circulating blood falls, as in all cases of external or internal bleeding, or burns. The treatment for shock is:

1. Treat the cause, e.g., stop bleeding.
2. Keep the casualty still. Lay him down with his head low and turned to one side.
3. Reassure the casualty.
4. Raise and support the casualty's legs.
5. Loosen any tight or restrictive clothing.
6. Shelter from the cold and keep comfortable. Do not overheat.
7. Check breathing rate, pulse and level of response at ten minute intervals.
8. If breathing becomes difficult or vomiting occurs, place in the Recovery position.
9. If the casualty becomes unconscious, follow the ABC rule.
   - **Do not** move the casualty unnecessarily
   - **Do not** give anything to eat or drink (moisten his lips with water if necessary)
   - **Do not** use hot water bottles
   - **Do not** allow the casualty to smoke

**Treatment for Cuts and Grazes**

Trivial cuts and grazes which involve only slight bleeding should be treated as follows:

1. If possible, wash hands before dealing with the wound.
2. Lightly rinse the wound with running water, if available, until it is clean.
3. Temporarily protect the wound with a sterile swab. Clean the surrounding area with water and soap, if available. Wipe away from the wound using each swab once only.
4. Take care not to wipe off any blood clots.
5. Dab gently to dry.
6. If bleeding persists, apply direct pressure.

7. Cover with an adhesive dressing or appropriate dressing.

8. If in any doubt about the injury, seek medical aid.

**Tetanus Infection**

Every wound carries the risk of tetanus infection. Any casualty with a wound who has not had an anti-tetanus injection or whose last injection was more than five years ago should be referred for medical advice.
FRACTURES AND HOW TO TREAT THEM AND OTHER INJURIES

Fractures

A fracture is a broken or cracked bone, they may be either:
- **Closed.** This is where there is no external injury.
- **Open.** The bone may protrude through the skin.

Signs and Symptoms of Fractures
Not all the signs and symptoms will be present. Some may develop later. Those which may be seen or described by the casualty are:
- The casualty may have felt or heard the bone snap.
- Pain, increased by movement.
- Inability to move the injured part normally.
- Tenderness on gentle pressure at or near the fracture site, with swelling and/or bruising in that area.
- Deformity, such as a limb at an unusual angle or other abnormality, especially when comparing one side of the body with the other.
- Signs and symptoms of shock, particularly in the case of closed fractures.

Treating Fractures
The injured part should be steadied and supported whilst dealing with the more important priorities, if this is possible without hindering the immediate treatment. This applies particularly to putting the casualty into the Recovery position which should be done with regard for the other injuries.

Open wounds with severe bleeding must be immobilised and then treated as a bleed, treating a bone protruding outside the wound as for an embedded foreign body.

Immobilising Fractures
If it is essential for first aiders to move the casualty or the ambulance is likely to be delayed, immobilise the injured part by fixing it to another part of the body with padding and bandages.

Blisters and Stings

**Blisters**
Blisters are caused by friction or heat. Unless a blister breaks or is likely to be further damaged it requires no treatment. If it does break or is likely to be further damaged apply a dressing large enough to extend well beyond the blistered area — **do not break a blister.**

**Stings**
Insect stings may be painful but do not usually require first aid treatment. They may cause a problem in people who are allergic to the poison in the sting, in the case of multiple stings from a swarm of insects or where stings in the mouth have caused swelling. The general treatment is to:
1. If the sting is embedded in the skin, grasp the sting with tweezers as near as possible to the skin surface and remove.
2. Relieve pain and swelling by applying a cold compress.
3. If pain or swelling increases over the next day, seek medical aid.

**Stings in the Mouth or Throat**
The treatment for stings in the mouth or throat resulting in swelling is to:
1. Give the casualty ice to suck, or rinse the mouth with cold water.
2. If breathing is difficult place in Recovery position.
3. Arrange removal to hospital.

**Burns**

Burns are injuries to the body tissues which may be caused in the following ways:
- **Dry Burns.** Caused by contact with flames, hot objects and friction.
- **Scalds.** Caused by wet heat such as steam, hot water or fat.
- **Cold Burns.** Caused by contact with a very cold object.
- **Chemical Burns.** Caused by contact with chemicals (including some household items).
- **Electrical Burns.** Caused by electric current or lightning.
- **Radiation Burns.** Caused by rays from the sun.

Most burns need medical attention, including:
- Any burn more than 25 mm (1 inch) square in area.
- All burns resulting from electrical contact.
- Any deep burn involving all layers of the skin.

**Treatment**
1. If clothing is on fire, put out the flames by wrapping the casualty tightly in a coat or heavy material that will not catch.
2. Cool as quickly as possible by flooding the affected area with cold water. For minor burns and scalds place the injured part under slowly running cold water or immerse in cold water for at least ten minutes, but longer if the pain persists.
3. Carefully remove any clothing soaked in boiling fluid, such as hot tea or coffee.
4. **Do not** remove burnt clothing or anything that is sticking to the burn.
5. Reassure the casualty.
6. Remove rings, watches etc., before the affected area begins to swell.
7. Cover the burn with a sterile dressing.
8. Immobilise a badly burnt limb.
10. If the casualty is conscious — give frequent sips of cold water.

**Do not:**
- Use plasters or adhesive materials.
- Use any creams or lotions.
- Break blisters.
- Remove loose skin or otherwise interfere with the injury in any way.
Injury to Joints and Muscles

Sprains and Strains
A sprain occurs when ligaments and issues at a joint are wrenched or torn, causing pain and tenderness at the joint, increased by movement. Swelling will occur and later, bruising.

A strain is the overstretching and possible tearing of a muscle, causing pain at the site of the injury with stiffness and cramp.

Treatment
Remember to use the mnemonic: R I C E

R — Rest and support the joint in the most comfortable position.
I — Ice bag, or cold compress, applied for 30 minutes if the sprain is recent.
C — Compress, by applying a firm bandage over a good layer of cotton wool.
E — Elevate the injured limb.

Note: If in doubt, treat as a fracture.

Dislocation
A dislocation is the displacement of a bone at a joint, usually shoulder, elbow, thumb, finger or jaw. Symptoms and signs include severe and sickening pain at the joint with immobility of the joint. The joint will appear misshapen and swelling will occur. To treat a dislocation:

- Do not attempt to ‘reduce’ the dislocation by moving the bones to their normal position.
- Support and secure the injured part in the most comfortable position using padding, bandages and slings.
- Remove to hospital.

Note: If in doubt, treat as a fracture.

Foreign Body in the Ear or Nose
An insect in the ear may be removed by tilting the casualties head and flooding the ear with tepid water. Otherwise do not attempt to remove foreign bodies from the ear or nose — seek medical aid or remove to hospital.