Introduction:

- A person who gives treatment for the one suffering from a disease or an accident, to improve his condition is called an" aides" and the medical treatment given as aid is called " first aid"
- If an accident happens in the workplace, you cannot be a helpless witness, since simply standing by can potentially worsens the situation. This is why it's important to have at least a basic knowledge of first aid.
- At its most basic, first aid is the initial assistance given to a victim of injury or illness. Comprised of relatively simple techniques that can be performed with rudimentary equipment, first aid is usually carried out by a layperson until professional medical assistance arrives.

Definition of first aid:

- First aid is the provision of immediate care to a victim with an injury or illness, usually effected by a lay person, and performed within a limited skill range.
- First aid is normally performed until the injury or illness is satisfactorily dealt with (such as in the case of small cuts, minor bruises, and blisters) or until the next level of care, such as a paramedic or doctor, arrives
- First aid is an emergency aid or treatment given to someone injured, suddenly ill, etc., before regular medical services arrive or can be reached.

Objectives of first aid/guiding principle:

- The key guiding principles and purpose of first aid, is often given in the mnemonic "3 Ps". These three points govern all the actions undertaken by a first aider.
- **P**revent further injury
- **P**reserve life
- **P**romote recovery

Philosophy of First Aid

- In the pre-hospital setting, the key contributors to survival and recovery from illness and injury are prompt and effective maintenance of the body's primary functions:

1. Airway
2. Breathing
3. Circulation
4. Bleeding control (life threatening)

Importance of first aid:

The importance of first aid is hard to overestimate. Among the major benefits of first aid are the following:

- Providing quick medical treatment until professional assistance arrives.
- First aid helps ensure that the right methods of administering medical assistance are provided.
- Knowledge in first aid also benefits the individuals themselves.
- It affords people with the ability to provide help during various emergency situations.

Principles of emergency care:

- Collect the detailed history of accident either from the victim or from anyone who has witnessed the accident.
- The victim's injury should be examined thoroughly, taking note of every symptom, to know the correct diagnosis.
- By the help of the diagnosis, treat the victim until the doctor arrives or shift the victim to the hospital and aid the patient during transport.
- Call the doctors or shift the victim to the hospital as soon as possible, so that the patience can recover soon from doctor's treatment instead of prolonging the first aid.

Golden rule's of first aid.

- Do first things first quickly, quietly and without fuss or panic.
- Give artificial respiration if breathing has stopped-every second counts.
- Stop any bleeding.
- Guard against or treat for shock by moving the casualty as little as possible and handling him gently.
- Do not attempt too much-do the minimum that is essential to save life and prevent the condition from worsening.
- Reassure the casualty and those around and so help to lessen anxiety.
- Do not allow people to crows round as fresh air is essential.
- Do not remove clothes unnecessarily.
- Arrange for the removal of the casualty to the care of a Doctor or hospitals soon as possible

Content of the first aid kit:

The Red Cross recommends that all first aid kits for a family of four include the following:

Dressing:

- 2 absorbent compress dressings (5 x 9 inches)
- 25 adhesive bandages (assorted sizes)
- 1 adhesive cloth tape (10 yards x 1 inch)
- Sterile eye dressing
- Gauze pad

Medications:

- 2 hydrocortisone ointment packets (approximately 1 gram each)
- 5 antibiotic ointment packets (approximately 1 gram)
- 5 antiseptic wipe packets
- 2 packets of aspirin (81 mg each)
- Bandages:
- 1 roller bandage (3 inches wide)
- 1 roller bandage (4 inches wide)
- 5 sterile gauze pads (3 x 3 inches)
- 5 sterile gauze pads (4 x 4 inches)
- 2 triangular bandages

Content of the first aid kit:

Equipment's:

- Tweezers-to pull out stings
- Scissors-to cut dressing/bandage
- Oral thermometer (non-mercury/nonglass)
- 2 pair of nonlatex gloves (size: large)
- Safety pin

Others:

- 1 blanket (space blanket)
- 1 breathing barrier (with one-way valve)
- 1 instant cold compress
- First aid instruction booklet

FIRST AID IN EMERGENCIES

Asphyxia

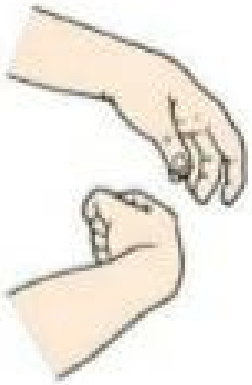
- **Definition** : Asphyxia means one of the respiratory problems where lungs do not get sufficient supply of air from breathing.
- **Signs/Symptoms**: Blue discoloration of face, tongue, and lips; gasping; inability to speak; unconsciousness.

Management:

- Remove the causality from the affected situation
- First try the Heimlich maneuver, grasping the victim from behind with hands linked in front and compressing the abdomen just below the ribs.
- Encourage victim to cough up foreign objects in throat; as a last resort, rap victim between shoulder blades to dislodge object.
- For asphyxia caused by gas or fumes, remove victim to a clear atmosphere; use artificial respiration.
- Open the airway and begin to give mouth to mouth ventilation immediately
- Place the patient in a recovery position
- Apply water over the face, make the patient to drink a sip of water
- Sent the causality to hospital.

Heimlich Maneuver

1. Lean the person forward slightly and stand behind him or her.



2. Make a fist with one hand.

3. Put your arms around the person and grasp your fist with your other hand near the top of the stomach, just below the center of the rib cage.

4. Make a quick, hard movement, inward and upward.

Place the infant stomach-down across your forearm and give five thumps on the infant's back with heel of your hand

Place fist above navel while grasping fist with other hand. Leaning over a chair or counter-top, drive your fist towards yourself with an upward thrust


alamy stock photo
C96438
www.alamy.com

Drowning:

- **Drowning**: Drowning is the result of complete immersion of the nose and mouth in water (or any other liquid). Water enters the windpipe and lungs, clogging the lungs completely.

Management: The aim of first aid is to drain out water (or other matter) from lungs and to give artificial respiration.

- Act quickly. Remove seaweeds and mud from the nose and throat. Start artificial ventilation immediately. This is possible even when the casualty is in water.
- Turn the victim face down with head to one side and arms stretched beyond his head. Infants or children could be help upside down for a short period.
- Raise the middle part of the body with your hands round the belly. This is to cause water to drain out of the lungs.
- Give artificial respiration until breathing comes back to normal. This may have to go on for as long as two hours.
- Remove wet clothing.
- Keep the body warm, cover with blankets.
- When victim becomes conscious, give hot drinks viz coffee or tea.
- Do not allow him to sit up.
- After doing the above, remove quickly to hospital as a stretcher case.

Suffocation by Poisonous Gases:

Definition: suffocation occurs when no air enters the rooms and to the nose and the room is a confined space where all the oxygen is used up like caves, holes and wells without water.

1. **Carbon Monoxide** (lighter than air): This gas is present in car-exhaust fumes, in household coal gas: during incomplete combustion of charcoal stoves and in coal mines.

Management:

- The first aid treatment consists in removing the person from the area, applying artificial respiration and giving pure oxygen, if available.
- Ensure circulation of fresh air before entering the room by opening the doors and windows.
- Before entering the enclosed space take two or three deep breaths and hold your breath as long as you can.
- Crawl along the floor (as the gas is lighter than air)
- Remove the casualty as quickly as possible to fresh air.
- Loosen his clothes at neck and waist and give artificial respiration, if asphyxiated.

Suffocation by Poisonous Gases:

2. **Carbon-dioxide** and other (heavier than air): This gas is found in coal mines, deep unused wells and sewers. Various other gases such as leaking refrigerator gases; compressed gases used for cooking and lighting may also cause suffocation.

Management

- Observe all the precautions mentioned above.
- Enter in an upright position (as the gas is heavier than air and collects near the floor)
- Remove the casualty as quickly as possible to fresh air.
- Wherever ventilation is not possible and deadly poisonous gas is suspected, use a gas mask to protect yourself.

Suffocation by Poisonous Gases:

3. Suffocation by smoke

- **Management:**
- Protect yourself by a towel or a cloth (preferably wet) over your mouth and nose.
- Keep low and remove the casualty as quickly as possible away from the area.

Hanging, strangulation, and throttling:

- **Hanging, strangulation, and throttling:** If pressure is exerted on the outside of the neck, the airway is squeezed and the flow of air to the lungs is cut off. The three main reasons or causes why this could happen are:
- Hanging= suspension of the body by a noose around the neck
- Strangling= constriction around the neck
- Throttling = squeezing the throat.

Hanging and strangulation may occur accidentally for example, by tie or clothing caught in machinery. Ranging (ring) may also cause a broken neck, so the casualty must be handled carefully.

Hanging, strangulation, and throttling:

- **Signs/symptoms:**
- There may be a constricting article around the neck.
- Marks around the casualty's neck where a constriction has been removed.
- Uneven breathing, impaired consciousness; grey-blue skin (cyanosis).
- Congestion of the face, with prominent veins and possible; tiny red spots on the face or on the whites of the eyes.

Hanging, strangulation, and throttling:

Management:

- Immediately remove any constriction from around the casualty's neck, Support the body while you do so if it is still hanging
- Do not move the casualty unnecessarily in case of spinal injury
- Do not destroy or interfere with any material, such as knotted rope, that police may need as evidence.
- Lay the casualty on the floor. Open the airway and check breathing.
- If she is not breathing be prepared to resuscitate
- If she is breathing, place her in the recovery position

Shock:

- **Definition**: Poor circulation to the vital organs. Shock is very serious and life threatening. The casualty may not know that they are in shock.
- **Causes**: Dilated blood vessels, bleeding, severe dehydration, all leading to a drop in blood pressure, which results in poor circulation. These can be caused by severe emotional trauma, physical injury, illness, etc.
- **Signs/Symptoms:**
- Unusual behavior (e.g. Very calm or very anxious),
- Lack of pain to an injury
- Rapid breathing
- Rapid but weak pulse
- Bluish skin (cyanosis)
- Unconsciousness.
- **Management**:
- Activate the ambulance right away.
- Assist the person to lie on their side to improve circulation, treat any injuries, help them take any medication for an illness.

Fainting

- **Definition**: This is very similar to shock except it is a temporary condition.
- **Causes**: It usually occurs because of a temporary decrease of blood flow to the brain, which can be caused by not eating properly, standing up too fast, or low blood pressure.
- **Signs/Symptoms**: The casualty feels faint, or collapses.
- **Management**:
- If they feel faint have them lie down which will help with circulation.
- If they faint they will usually wake up in a few seconds. Encourage the person to stay lying down for a few minutes until they feel better. If they do not wake up within one minute, or they became injured during the fall then activate the ambulance, and treat any injuries.
- Notes: If someone has fainted, even if they feel fine afterwards, they should still go see their doctor to rule out any major problem.

Wound:

- Abdominal and chest wounds can be quite serious because internal organs may be damaged, which can cause internal bleeding and even shock.
- Abdominal and chest wounds are considered an emergency, and you should call for immediate medical help, sespecially if there are symptoms of shock, such as dizziness, weakness, pale and clammy skin, shortness of breath, and increased heart rate.

- While waiting for medical care, give first aid treatment for shock.
- Have the injured person lie quietly with his or her feet elevated about 12 inches.
- Cover him or her with a blanket to maintain body warmth.

Wound:

Management:

- Help the person to remain calm. If the cut is large or bleeding heavily, have them lie down.
- If the wound is on an arm or leg, raise the limb above the heart to slow bleeding.
- Remove obvious debris from the wound, such as sticks or grass.
- If the object is embedded in the body, do NOT remove it.
- If the cut is small, wash it out with soap and water.
- Do NOT clean a large wound.
- After putting on clean latex gloves apply firm pressure to the wound with a folded cloth or bandage for about 10 minutes.
- Do not remove the bandage to look at the wound during this time, as it may begin bleeding again.
- If blood soaks through, add another cloth or bandage and continue holding pressure on the cut for an additional 10 minutes.
- When bleeding has stopped, tape a clean bandage over the cut.

Wound

Seek medical care for a cut or wound if:

- It's jagged or deep, or if it is a puncture wound.
- it's on the face
- it's the result of an animal bite
- there is dirt that won't come out after washing
- the bleeding will not stop

Hemorrhage/Bleeding:

External bleeding: This is where the blood vessels and the skin are cut and blood is escaping the body.

Causes:

- Damage to the skin caused by trauma.
- Can be a laceration (clean cut), abrasion, or avulsion (with skin still hanging).

Management:

- If it's a minor bleed allow some bleeding to take place as this will help clean the wound.
- Then wash with warm water and soap, apply a dressing to keep it clean, change the dressing every few hours, and monitor for signs of infection.

Hemorrhage/Bleeding:

Management conti—"

- If the bleeding is severe then apply the RED principle:
- **Rest**: make sure the person is resting so as to decrease the heart rate and blood pressure.
- **Elevate**: raise the injured limb above the heart to slow down the bleeding.
- **Direct Pressure**: put pressure directly over the wound to help control bleeding, tie the dressing in place. But, do not make the dressing too tight so as to restrict blood flow. Do not remove the dressing.
- **Pressure Points**: Applying pressure over the pressure points pressing over the underlying bone pressure points on the arms (brachial pressure point) on the groin (femoral pressure point).
- **Applying a tourniquet**: A standard tourniquet is a piece of web belting about 36" long with a buckle device to hold it tightly in place when applied. This is used to stop bleeding. Care to be taken not to cutoff the circulation.
- Get medical help.

Notes:

- If there is an impaled object do not remove it as this can cause more bleeding. Instead, apply a dressing around the object then tie it in place to control bleeding.
- Take extra care not to move the object.

RED

Hemorrhage/Bleeding:

Internal bleeding: This is where the blood vessels are broken but the skin is not, so the person is bleeding under the skin. Injured organs will result in internal bleeding.

Causes: Usually physical trauma, being hit, falling. Very common in car accidents.

Signs/Symptoms:

- Bruising, pain
- Tenderness
- Mechanism of the injury (what happened).
- There may be blood in their spit, vomit, or urine.

Hemorrhage/Bleeding:

Internal bleeding conti:

Management:

- If it's a minor bruise on the arm or leg then rest the injured part, apply an ice pack for a few minutes, and watch for signs that it is not healing.
- If it's severe internal bleeding in the core of the body then active the ambulance, make sure the person is resting, treat for shock, apply an ice pack, but do NOT put pressure over the wound.

Notes:

- Internal bleeding is not always obvious, but can be life threatening.
- Infection can occur with any wound whether internal or external. If you suspect an infection then seek medical help immediately, as it can become life threatening.
- Watch out for warning signs such as; the wound is not healing or is getting bigger, discoloration, fluid discharge, and increased pain.

Bandaging:

- Bandaging is something you would do to control severe bleeding. Ideally you want to use sterile dressings but they may not be readily available so use whatever you have (e.g. towels, clothing). The idea is to put constant pressure over the cut to control bleeding. You want to tie with enough pressure to control the bleeding but not so much so that blood does not get through to the remainder of the limb. If you restrict blood flow that area may die and may require amputation, so be very careful. Once you've tied the dressing you need to check to make sure you did not make it too tight, and check this every couple of minutes. For example, if you've bandaged a forearm here's how you check for circulation:
- Compare both hands to make sure they are similar in temperature and color.
- Check the hand to make sure it is not swelling or turning blue.
- Ask the person if the hand feels numb or tingly.
- If they lose sensation then it's too tight. Do not remove the bandage but loosen it a bit.
- If the first dressing becomes soaked with blood then simply put another one on top. Do not remove the original one as you will be reopening the wound.
- **Notes**:
- Always use caution when dealing with bodily fluids. Wear gloves and wash your hands immediately after.
- Keep in mind that the injured person may go into shock.

Purposes of bandage:

(1) To secure dressing in position.,

(2) To form slings for support.

(3) To secure pads

- Roller Bandages: These bandages are made of cotton, gauze crepe, elastic fabric or linen are wrapped around the injured in spiral turns, figure of eight. To improvise, material may be torn into strips of the required length and width.
- Width required for finger 2.5 cm
- For head and arm 6 cm
- For the leg, about 9 cm
- For the body 15 cm
- The bandages should be tightly and evenly rolled.

Rules for Applying Roller Bandages:

- Face the casualty, except for bandages the head or back ofthe neck.
- When bandaging the left limb, hold the roll of bandage in the right hand and vice versa.
- Apply the outer side of the bandage to the part, and unroll no more than 5 cm at a time.
- To bandage a limb, work from below upwards, and from inside towards the outside over the front of the limb.
- See that the bandage is neither too tight nor too loose.
- Each layer should cover two thirds of the previous layer of bandage.
- Finish in front, not over the wound, and fix the end with a safety pin, sticking plaster, stitching, or by tearing the end into two tails and tying.
- The completed bandage should be comfortable, look neat and fulfil its purpose with no restriction of circulation.

Patterns Used in Bandaging

- Circular turns, as used for head and trunk.
- Simple spiral, for parts of uniform thickness, e.g. fingers, wrist.
- Reverse spiral, used on limbs where the thickness of the part various e.g. Forearm, leg
- Figure – of – Eight: This may be used on limbs instead of the reverse spiral, also for the hand and foot.
- Spica, used for the shoulder, hip and thumb
- Divergent Spica, for a flexed joint, e.g. elbow, knee, heel
- Recurrent, to cover tips of fingers or a stump

Patterns Used in Bandaging

- Special bandages such as capelin for the head, eye bandage, ear and breast bandages.
- Choosing the Correct Size: Before applying a roller bandage, check suitable width for the injured area
- Applying a Roller Bandage: Keep the roller part of the bandage (Head) upper most as your work (the unrolled part) is called the "tail". Stand in front of the casualty except in cape line (Head bandaging and eye bandage are applied standing behind the client).Support the part while bandaging.
- Learn to use both hands equally, changing the bandage hand to hand. Work from below to upwards.
- Finish off securely with either reef knot, safety pin, bandage clip, adhesive tape. Tucking in the end.
- Splinting: Splints can be made out of wood, card board, iron rods used to support the fractured part and for immobilization.

Patterns Used in Bandaging

- Triangular Bandages: have various use in first aid. To make two bandages, take a 1 meter square piece of strong cotton cloth, cut in across from corner, and hem the edges. The long side is called the 'base', and the corner opposite to it the 'point', The bandages may be applied opened out or it can be folded into a 'broad' or 'narrow' bandages.A reef knot is used to tie the ends of the bandage, because it is flat and will not slip. The rule for tying a reef knot is 'right over left, then left over right'. If you keep this rule you cannot go wrong.
- Bandage for the Scalp: Place the open bandage on the head with the point at the back. Fold a narrow hem at the base, place it just above the eyebrows, then take the two ends backwards, cross them below the occiput with the point underneath, then back to the forehead where they are tied. Draw the point down and then upwards, and fix it with a safety pin.

Patterns Used in Bandaging

- Slings are used to support or limit movement of the upper limb, in cases of injury or inflammation. Three types of slings are used:
- Large Arm sling: This is used in cases of simple rib fracture and for fracture of the forearm.When applied, only the finger tips should show, the whole arm being well supported.
- Collar and Cuff Sling: This supports the wrist only. With the casualty's forearm flexed and fingers touching the opposite shoulder, a clove hitch, made from a narrow bandage, is placed round his wrist. The ends of the bandages are taken around the neck and tied in the hollow just above the collar bone, on the injured side.

Patterns Used in Bandaging

- Triangular Sling: This supports the arm with the hand well raised. It gives relief from pain when used in fracture of the collar bone. First place the open bandage across the chest with the point beyond the elbow and one end over the hand. Tuck the base comfortably under the forearm. Take the end behind the elbow across the back and tie to the first end with the knot just in front of the shoulder, on the uninjured side. Fold in the point and fix the bandage with the safety pin.
- Improvised Slings: The lower edge of the casualty's coat or shirt may be turned up and pinned to support the arm, or the hand may be passed inside a buttoned up coat.A muffler, tie or other suitable cloth may be used to support the arm.

- **Amputation** (e.g. a finger): treat the injured body part as you would any other cut. Then take the amputated body part and place it in a clean plastic bag. Take that first bag and place it in a second plastic bag containing ice. Make sure it goes to the hospital with the person, as they can sometimes reattach the body part.

Nose bleeds/epistaxis:

- Have the person rest, have them pinch their nose just below the bone, and lean slightly forward.
- If the bleeding is severe, if it does not stop in about 10-15 minutes, or if there was an injury to the head or face, medical attention is needed.
- Do not have the person lean their head back, as all this does is have them swallow their blood, which is not desired.


Head tilted
forward
Squeeze firmly
above nostrils
Child sits in
adults lap
© Kids Health Info
RCH, Melbourne

Broken bones and fractures

- **Definition**: A break or crack in a bone is called a fracture.
- In most cases the damage to the bone will be under the skin, which is called a closed fracture,
- But sometimes bits of the bone can puncture through the skin to become an open fracture.
- In both cases you'll need to treat the casualty for shock.
- Even if you can't see any blood, the break might have caused some internal bleeding.
- To break a fully grown bone, a huge amount of force is needed
- But bones that are still growing are supple and can split, crack or bend quite easily, a bit like a twig.

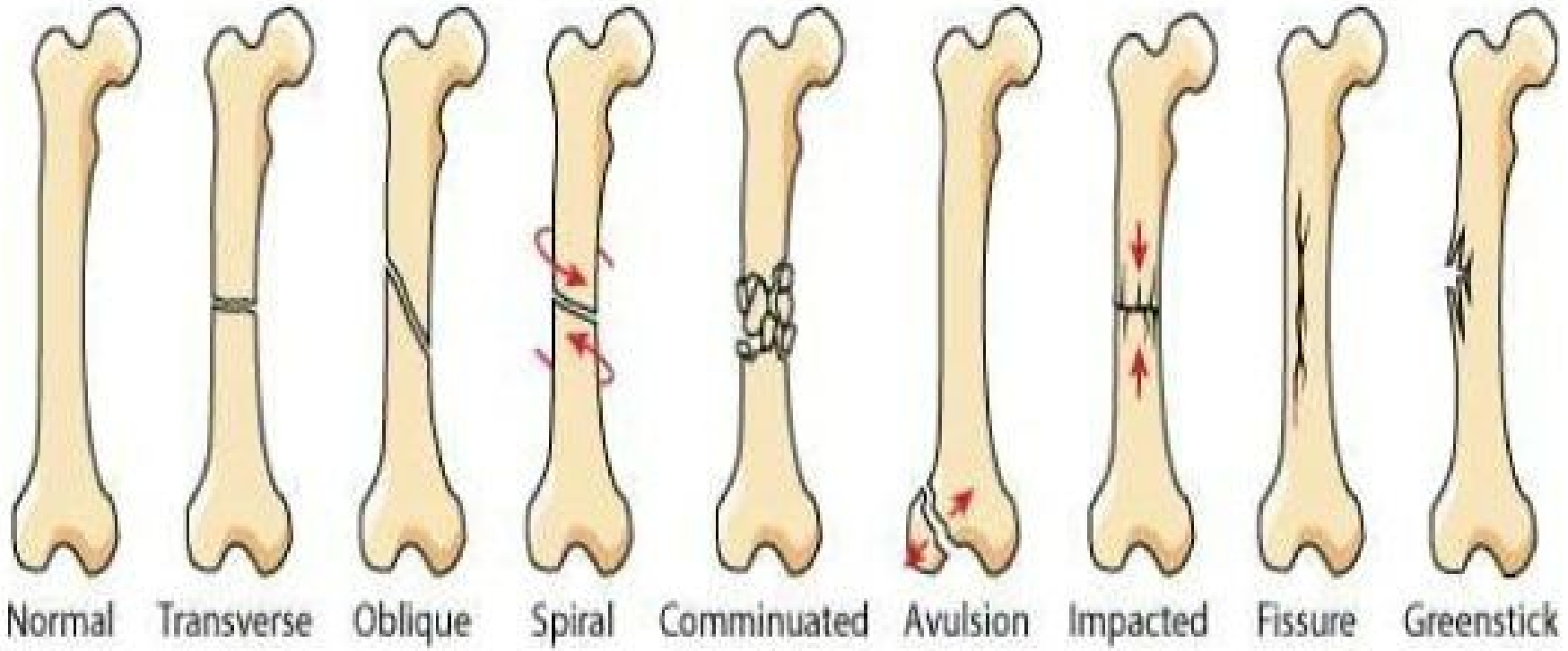
Fracture

Signs:

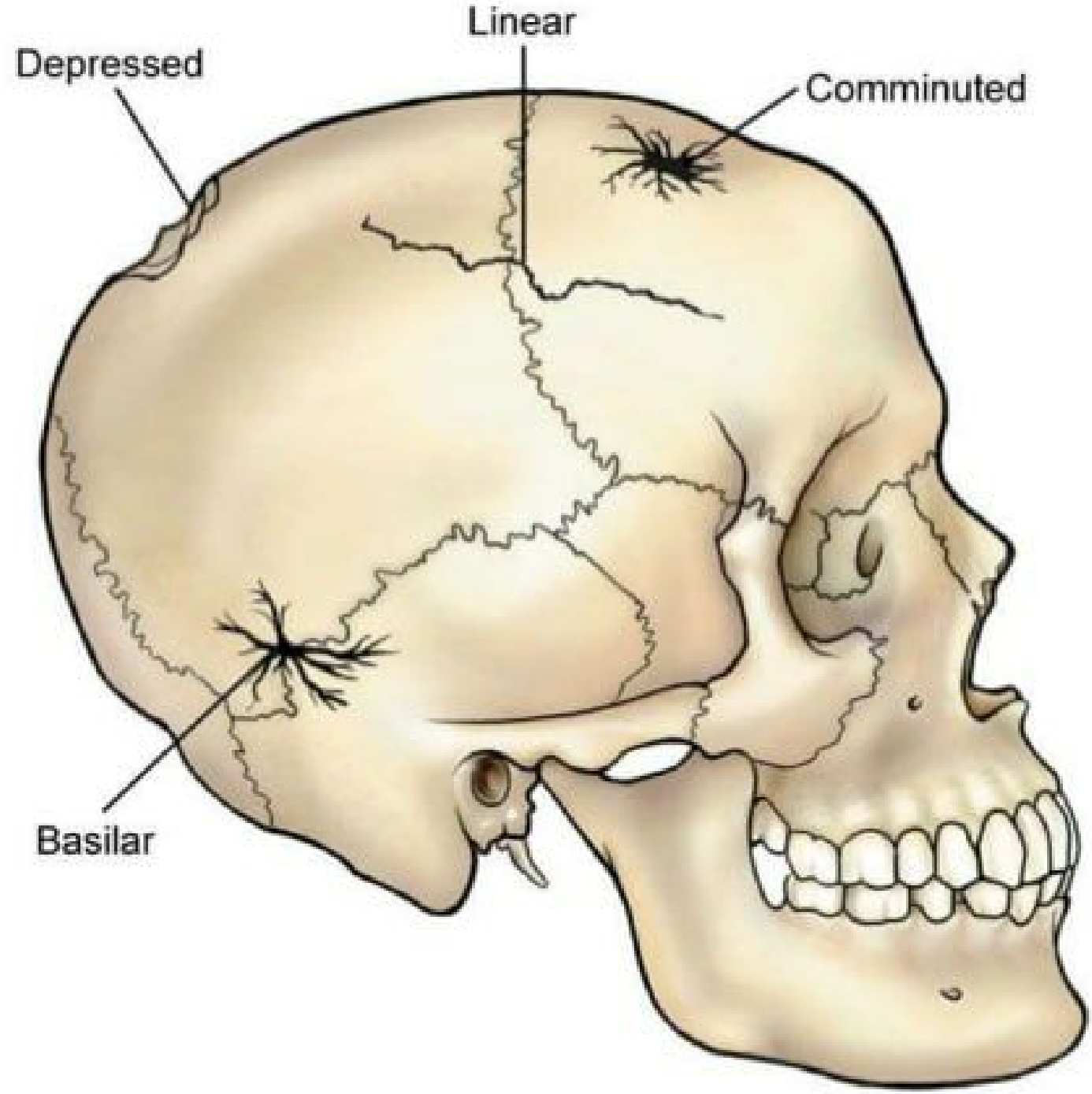
- The seven things to look for are:
- Swelling
- Difficulty moving
- Movement in an unnatural direction
- A limb that looks shorter, twisted or bent
- A grating noise or feeling
- Loss of strength
- Shock

Types of fracture:

- **Green stick fractures**: Closed fracture mostly it occurs in children..
- **Complicated fractures**: They occur when the jagged ends of the bone fragments damage blood vessels, nerves or a joint, broken bones in the chest may penetrate the lung, heart or liver. In fractures of the skull the brain is usually damaged.
- **Depressed fractures**: These occur in the skull when the broken ends of the bones are pressed inwards.
- **Commutated Fractures**: In these cases, the bone is broken into several fragments. This is serious because there will be muscle damage with more bleeding at the fracture site.

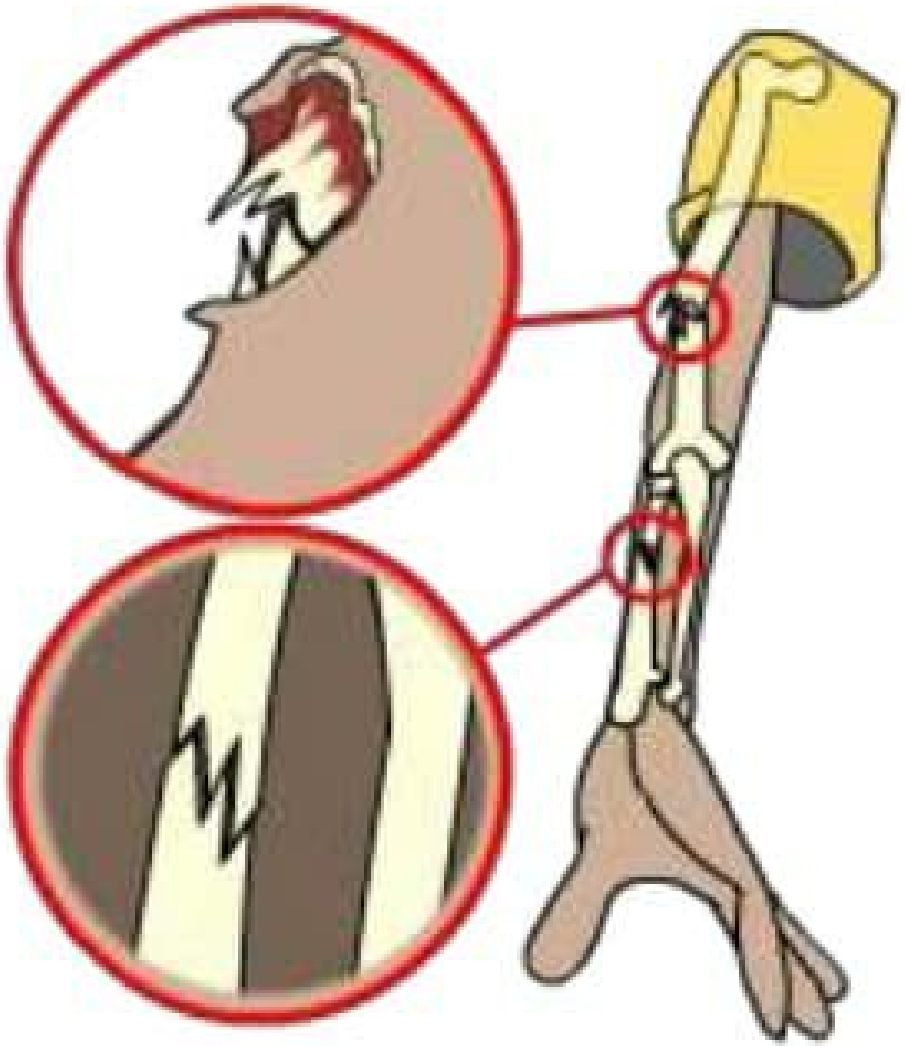

Normal
Transverse
Oblique
Spiral
Comminuated
Avulsion
Impacted
Fissure
Greenstick

Types of skull fractures



(From Monahan, F., & Neighbors, M. [1998]. *Medical-surgical nursing: Foundations for clinical practice* [2nd ed.]. Philadelphia: Saunders.)

Fig. 56-26. Skull fractures.

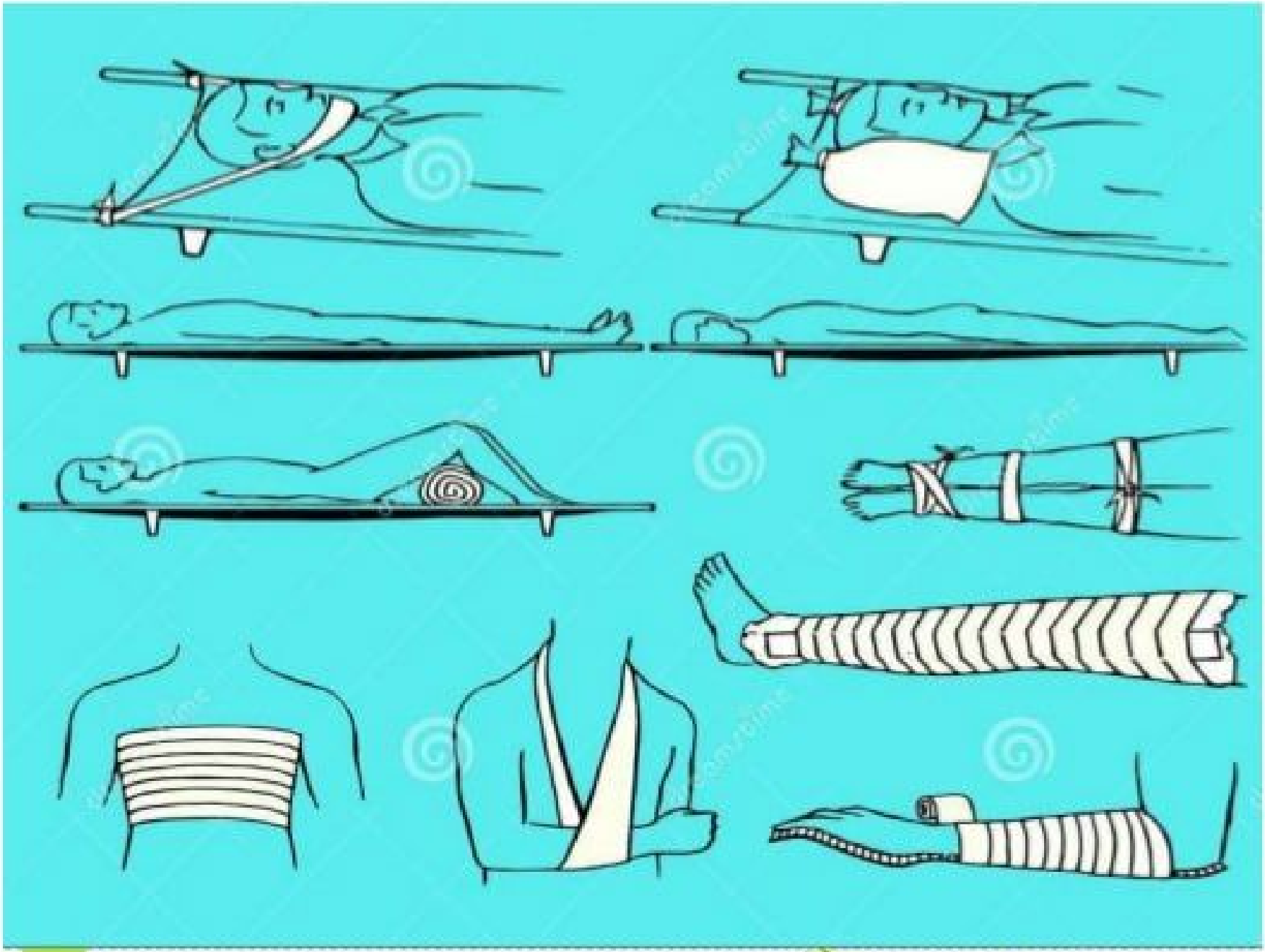


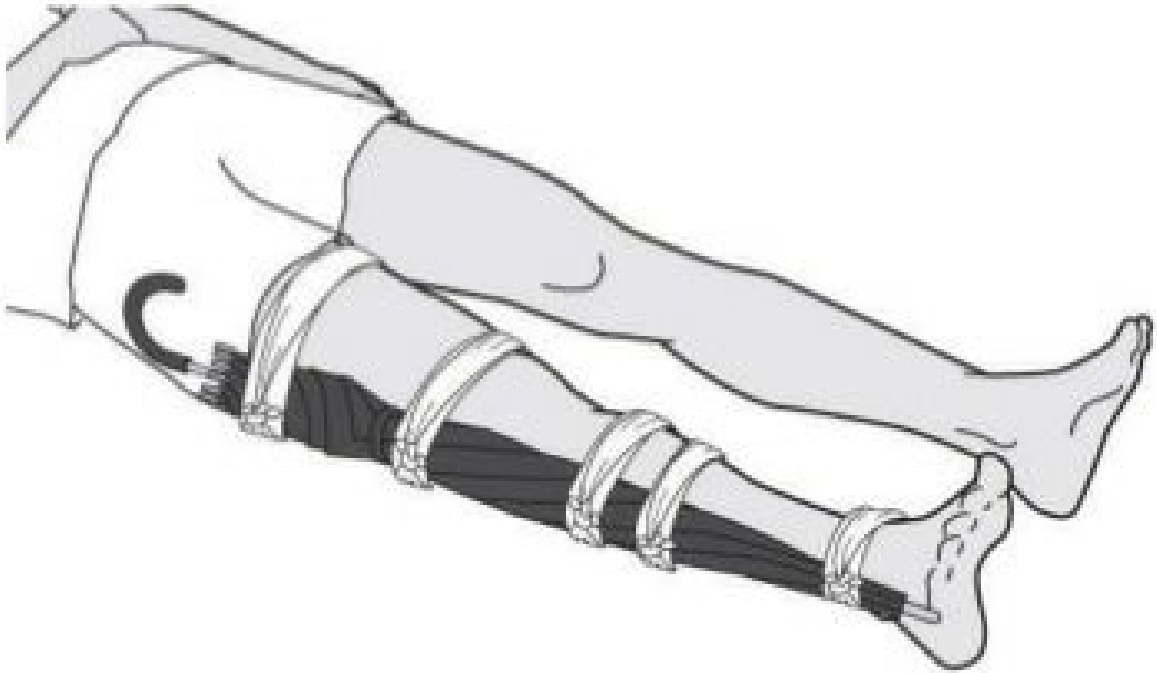
Types of fracture:

- **Impacted Fractures**: After a heavy fall, the fracture may be impacted by the force, (eg.) Spinal injury falling from tree.
- **Pathological Fractures**: These occur when the bone is weakened by loss of calcium, infection or cancer. Minimal cause a break in such cases. In old age the bones are more brittle, and may break spontaneously due to calcium loss which is part of the ageing process.
- **Stress Fractures:** Stress caused by repeated minor trauma as in athletic training. Involved in strenuous training, such as jogging or marathon running.

Management:

- If it is an open fracture, cover the wound with a sterile dressing and secure it with a bandage. Apply pressure around the wound to control any bleeding.
- Support the injured body part to stop it from moving. This should ease any pain and prevent any further damage.
- Once you've done this, call medical help. While waiting for help to arrive, don't move them unless they're in immediate danger.
- Protect the injured area by using bandages to secure it to an uninjured part of the body to stop it from moving. For example, fractures on the arm can be secured with a sling, and a leg with a fracture can be tied to the uninjured leg.
- Keep checking the casualty for signs of shock. This does not mean emotional shock, but is a life-threatening condition, often caused by losing blood.
- If they lose responsiveness at any point, open their airway, check their breathing and prepare to treat someone who's become unresponsive.



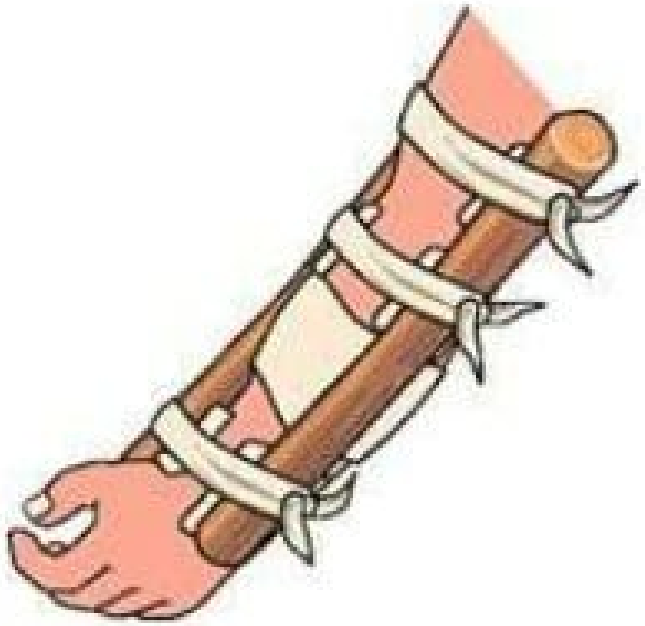


Splints:

- The main purpose of a splint is to keep an injured body part immobilized (e.g. a broken leg).
- It should only be done if paramedics are going to take a long time arriving, or if you have to move the person.
- Never move or try to realign the injured body part. Always splint in the position found.

There are three main types of splints:

- 1. Anatomical: this means using a non-injured body part to immobilize an injured body part. E.g. to splint a broken left lower leg you would tie both legs together so the good leg provides support to the injured leg.
- 2. Soft: this means using something like a thick sweat shirt, a jacket, a towel, or a blanket to wrap around and immobilize. This kind of splint works very well with hand or ankle/foot injuries.
- 3. Rigid: this refers to using a firm object, such as a piece of wood, to immobilize. There are many types of rigid splints you can purchase or you can use whatever you see around you e.g. magazines, newspapers, umbrellas, etc.



Injuries to the soft tissues:

- **Definition**:
  - This is an injury to a bone, a joint, a ligament, or a tendon.
  - Joint injuries usually involve a dislocation.
  - This is where the bone has popped out of its socket.
  - This may be accompanied with a fracture, a strain, or a sprain.
  - It may pop back in it may not.
  - Either way seek medical help.
  - Do not push it back into place.

Injuries to the soft tissues:

- Tendons are strong tissues that connect a muscle onto a bone.
- When a tendon tears it is called a strain.
- When they become torn they take a very long time to heal, many times never as good as before, and sometimes surgery is required to reattach them.
- When a ligament is torn it is called a sprain.
- Ligaments connect a bone to another bone.
- These are found around the joints.
- Ligaments are very strong, but, as with tendons, when they tear they take a long time to heal, never as good as before, and sometimes surgery is required.

Injuries to the soft tissues:

- **Causes**:
  - Any kind of force that is greater than what the tissue can withhold will cause such an injury. Some common activities include falling, twisting, getting hit, etc.
- **Prevention**:
  - Use safety equipment and wear it properly.
  - Use seat belts and car seats.
  - Keep joints and bones strong through weight bearing physical activities.

Injuries to the soft tissues:

Signs/Symptoms:

- A ‘snapping’ noise.
- Pain.
- Deformity.
- Inability to move.
- Swelling.
- Bruising.

Injuries to the soft tissues::

Management:

- Apply the RICE principle.

- Rest the injured body part and the entire casualty.
- Immobilize the injured body part.
- Cold compress over the injury to reduce swelling.
- Elevate the injured body part if it can be done without causing further injury.
  - Seek medical help.
  - Do not rub or move the injured body part.
  - If there is a protruding bone then bleeding will need to be taken care of by applying indirect pressure.
  - Never straighten or realign an injured body part.
- Notes: Bone fractures, if set properly, will heal fully in a few weeks and will be stronger than before. This happens because the area builds up with more calcification than before.

R - Rest
I - Ice
C - Compression
E - Elevation
R - Referral


© AP

Spinal Injuries:

Definition: • An injury to the muscles, bones, or nerves associated with the spine. The higher up on the spine it is the more serious the injury will be.

Causes:

- Very common in vehicle accidents
- Diving in shallow water
- Cycling accidents
- Any impact, direct or indirect, to these body parts.
- Sport accidents such as hockey and football, etc.

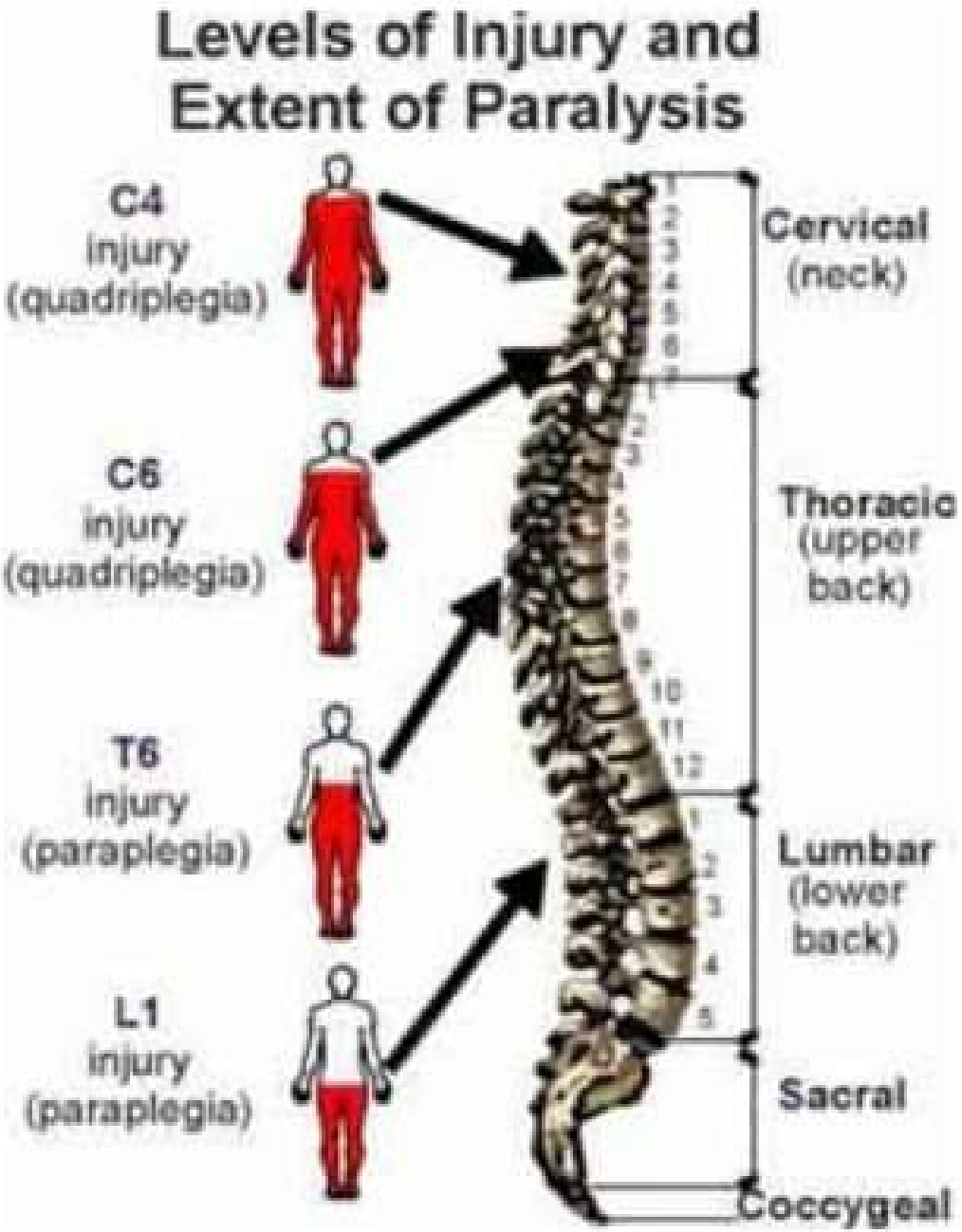
Spinal injury

Signs/symptoms:

- Mechanism of injury (how it occurred).
- Pain, numbness, or paralysis.
- Bleeding, swelling, or bruising around the head, ears, or nose.
- Unconsciousness.

Prevention:

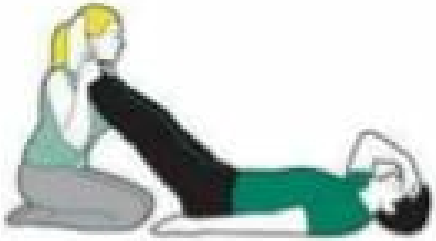
- Wear safety equipment and wear it properly.
- Know the safety rules of sports played.
- Use seat belts and car seats.
- Avoid alcohol intake when doing physical activity as it impairs sound judgment.


Levels of Injury and Extent of Paralysis
C4 injury (quadriplegia)
C6 injury (quadriplegia)
T6 injury (paraplegia)
L1 injury (paraplegia)
Cervical (neck)
Thoracic (upper back)
Lumbar (lower back)
Sacral
Coccygeal

Spinal injury

Management:

- Make sure the person doesn't move then get help.
- Hold them still. You need to and explain to them that they may have a serious injury and should not move.
- If they are unconscious do the CPR steps. Airway and breathing take priority.
- Notes: Any time there is a spinal injury you should also suspect a concussion, and visa versa.



Concussion

Definition: An injury to the head or the brain. Literally bleeding in the brain or the area around the brain.

Causes:

- Any impact, direct or indirect, to the head.
- May be associated with a spinal injury.

Signs/Symptoms:

- Mechanism of injury.
- Pain or numbness.
- Bleeding, swelling, or bruising.
- Confused.
- Loss of memory.
- Dizzy.
- Ringing in the ears.
- Nausea or vomiting.
- Unconsciousness.

Concussion

Prevention:

- Wear safety equipment and wear it properly.
- Know the safety rules of sports played.
- Use seat belts and car seats.
- Avoid alcohol intake when doing physical activity as it impairs sound judgment.

Management:

- Make sure the person doesn't move.
- Hold them still and explain to them that they should not move.
- Activate the ambulance right away.
- If they are unconscious do the CPR steps but open the airway with a modified jaw thrusts, as opposed to a head tilt.

Concussion

- Notes:
  - Any time there is a spinal injury you should also suspect a concussion, and visa versa.
  - Anyone with a suspected concussion should seek medical help as soon as possible.
  - If they have become unconscious from the concussion then activate the ambulance right away.
  - Many athletes will not admit to having had a concussion because then they cannot play anymore. Unfortunately that is why the condition becomes worse.
  - Concussions are very life threatening.
  - There is a condition called Baby Shaken Syndrome, where babies are injured by violent shaking.
- Never shake a baby – on purpose, by accident, or when angry.
- Never throw them up in the air – no matter how much they enjoy it.

Seizures

Definition: Seizures are neurological disorders where the signals in the brain become mixed up.

Causes:

- The most common cause is from the medical condition called epilepsy.
- However, they can also be caused by concussions
- Allergic reactions,
- Brain tumors,
- High fever in children.

Prevention:

- If someone has epilepsy they may have medication to take which will reduce the chance of seizures.
- Other causes are hard to prevent because nothing is suspected of being wrong until the seizure.

Seizure

Management for Generalized Convulsive Seizures:

- Keep calm; let the seizure take its course. Do not try to stop the seizure or revive the person.
- Protect person from further injury by moving hard or sharp objects away, but do not interfere with the person's movements. Place something soft and small, such as a sweater, under their head, and loosen tight clothing around the neck.
- Do not force anything in the person's mouth. This could cause teeth and jaw damage, or choking. The person will not swallow their tongue during a seizure.
- Roll the person on their side as soon as possible, to allow saliva or other fluids to drain away, helping to clear the airway. Do not be frightened if a person having a seizure stops breathing momentarily. •
- If a seizure goes on longer than 5 minutes, repeats without full recovery, or the person becomes injured, then call for medical assistance.

Seizure:

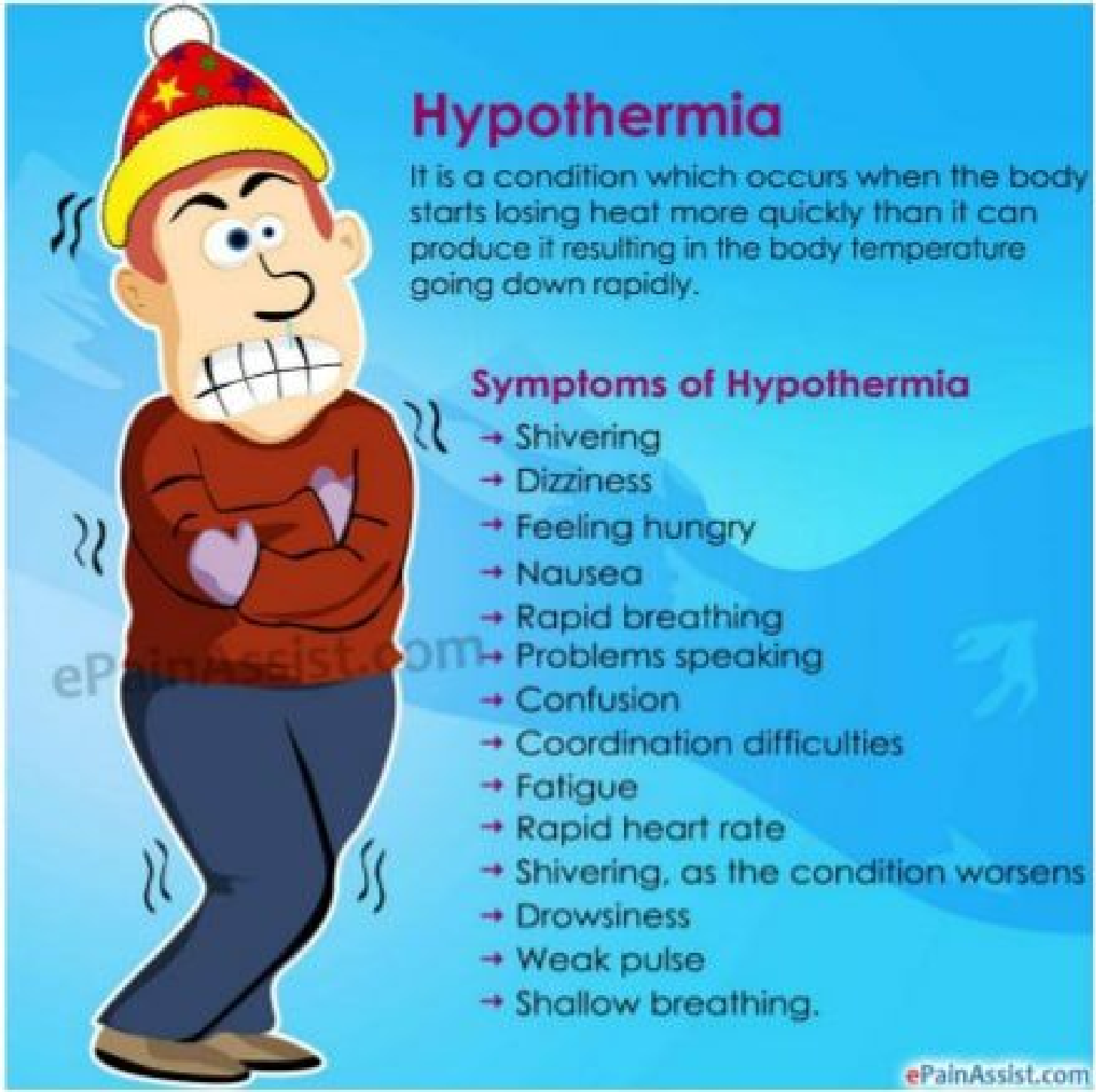
Management for Partial Non-Convulsive Seizures (e.g. like sleep walking):

- Stay with the person, let the seizure take its course. Do not try to stop the seizure or revive the person. The person will be unaware of his or her actions, and may or may not hear you.
- Gently guide the person away from danger, move dangerous objects out of the way.
- Partial seizures may spread to other areas of the brain. Do not be alarmed if a convulsive seizure follows.
- Notes: Always be comforting, be gentle, and reassure the person, as it may take some time for them to become re-oriented.

Hypothermia

- **Definition**: A drop in the core body temperature, even as little as 1 to 2 degrees Celsius, from the normal of 37 degrees Celsius. Sometimes this can happen within minutes, other times it takes a while to take place. It is sometimes accompanied by frost bite.
- **Causes & Prevention**:
  - Exposure to the cold.
  - Not being dressed properly.
  - Damp weather or being wet.
  - Being tired or dehydrated.

- **Signs/Symptoms:**
  - Feeling cold.
  - Shivering, which will stop as the condition worsens.
  - Becoming confused and disoriented.
  - Slow pulse and breathing rates, and eventually unconsciousness.
- **Management:**
- Get medical help.
- Get them inside near a heat source.
- Remove wet clothing and replace with dry clothing.
- If conscious give them warm fluids to drink – slowly.
- Avoid alcohol, caffeine, and carbonated drinks.

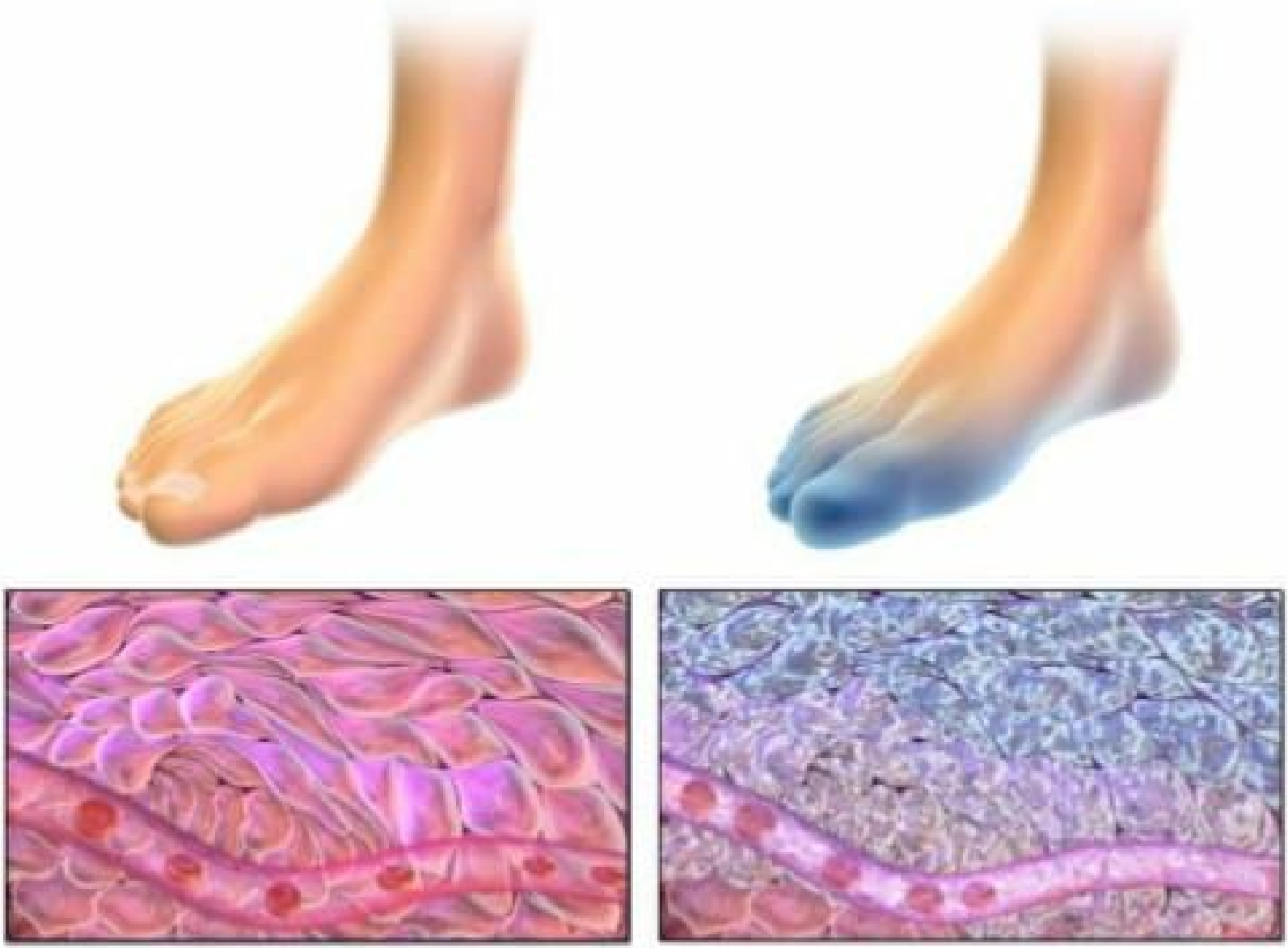

Hypothermia
It is a condition which occurs when the body starts losing heat more quickly than it can produce it resulting in the body temperature going down rapidly.
Symptoms of Hypothermia
→ Shivering
→ Dizziness
→ Feeling hungry
→ Nausea
→ Rapid breathing
→ Problems speaking
→ Confusion
→ Coordination difficulties
→ Fatigue
→ Rapid heart rate
→ Shivering, as the condition worsens
→ Drowsiness
→ Weak pulse
→ Shallow breathing.
ePainAssist.com

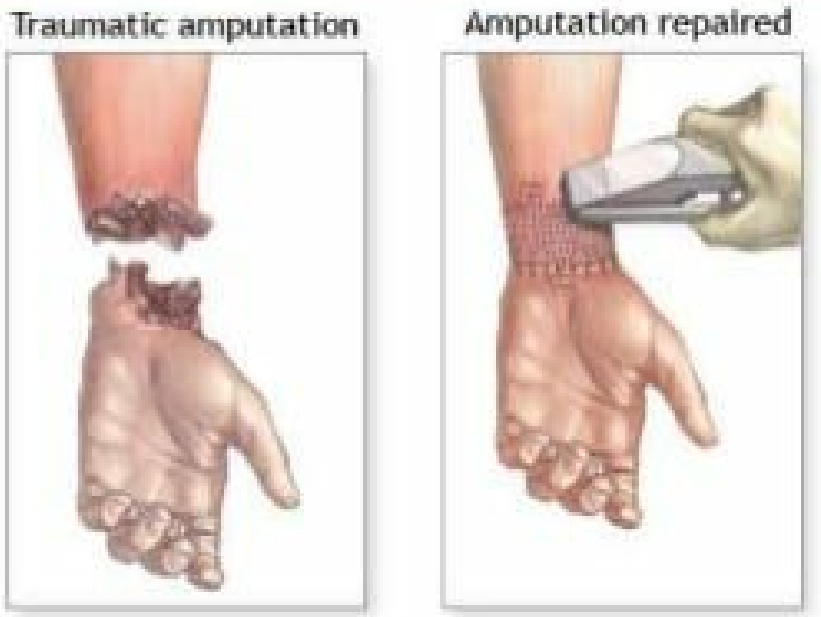
Frost Bite

- **Definition**: A freezing of a body part, such as the hand, foot, face, etc. Superficial is the surface of the skin, whereas deep frost bite affects the underlying tissues. Sometimes this is accompanied by hypothermia.
- **Causes & Prevention:**
- Exposure to cold, wind, wet conditions.
- Not wearing protective clothing.

- **Signs/Symptoms:**
  - Cold feeling.
  - Numbness.
  - Inability to use the body part.
  - Tingling, then pain.
  - As it gets worse all sensation will disappear.
  - The skin will first appear white or yellowish. If the tissue dies it will become black charred color.

- **Management**:
  - For deep frost bite get medical help.
  - Warm up the body part slowly and gradually by wrapping it in warm clothing and/or submersing it in luke warm water – not hot water as it will burn the skin.
- **Notes**:
- If there is a chance of the body part refreezing then it might be better to get medical help first before allowing it to warm up.
- Do not rub or force the body part to bend, this will cause more damage.


Normal
Frostbite



Heat Emergencies (Hyperthermia)

- **Definition:** A situation where the body's temperature increases. Perspiration is the body's main method of regulating its temperature. As sweat evaporates off the skin heat is taken with it, as a result cooling down the body. If this method is impaired, or it can not keep up, the body will quickly over heat.
- Causes & Prevention:
  - Exercising in hot humid and/or polluted weather and becoming dehydrated.
  - Drinking alcohol, caffeinated, or carbonated drinks (contributes to dehydration).
  - Over using saunas, whirlpools, and warm environments such as gyms, and aerobic classes.
- There are 3 levels of heat emergencies:

Cramp

1. Cramps : Painful muscular involuntary contraction

A muscle **cramp** is a strong, painful contraction or tightening of a muscle that comes on suddenly and lasts from a few seconds to several minutes. It often occurs in the legs. A muscle **cramp** is also called a charley horse. Nighttime leg **cramps** are usually sudden spasms, or tightening, of muscles in the calf.

s/s:

. -Sweating or moist skin. -Tired, irritable, and thirsty.


Causes of Leg Cramps:
• Dehydration or inadequate intake of water.
• Depleted levels of potassium and sodium. (salt)
• Depleted carbohydrate levels.
• Tense or stiff muscles.
• Vitamin deficiencies may also cause cramps.
• Poor blood circulation also causes cramps.
ePainAssist.com

Treatment:

Removing them from the heat. -Gently stretch/massage affected area.

- Slowly rehydrate with water, juice, or sport drinks. Rest for a couple of hours.
- Avoid alcohol, caffeinated and/or carbonated drinks.

Exhaustion

2. Exhaustion :

Heat exhaustion is a **heat**-related illness that can occur after you've been exposed to high temperatures, and it often is accompanied by dehydration. There are two types of heat exhaustion: Water depletion. Signs include excessive thirst, weakness, headache, and loss of consciousness. Salt depletion.

s/s

- -Sweating. -Tired. -Irritable. -Thirsty. -Lethargic. -Slight headache. -Nausea. -Dizzy/weak. -May have slightly elevated body temperature.

Treatment:

- Remove from source of heat.
- Slowly rehydrate by drinking water, juice, or sports drinks.
- Rest is very important to prevent a reoccurrence.
- Remove sweaty clothing.
- Fan or gently cool the skin with wet towels or ice packs.
- Avoid alcohol, caffeinated and/or carbonated.
- If vomiting occurs get an ambulance.

Stroke


Use a fan
to lower
temperature
Elevate feet
Apply cold
compresses
Give fluids
Have the person lie down

3. **Stroke (most serious) :**

Heatstroke is a condition caused by your body overheating, usually as a result of prolonged exposure to or physical exertion in high temperatures. This most serious form of **heat** injury, **heatstroke** can occur if your body temperature rises to 104 F (40 C) or higher. **Heatstroke** requires emergency treatment.

s/s

- -Elevated body temperature.
- -Very tired/weak.
- -Sweating may stop - this is not a good sign.
- -Severe headache.
- -Red hot dry skin.
- -Rapid, weak pulse becoming irregular, rapid breathing, or reduced/absent vital signs (consciousness, breathing, pulse).

Treatment:

- Remove from heat source.
- Place in recovery position.
- Call for an ambulance.
- Monitor/treat ABCs.
- Remove sweaty clothing.
- Fan or gently cool the skin with cool towels or ice packs.
- Do not douse with cold water.
- At this point it is too late to give fluids by mouth and it may induce vomiting.

Stroke

Stroke:

The sudden death of brain cells due to lack of oxygen, caused by blockage of blood flow or rupture of an artery to the brain. Sudden loss of speech, weakness, or paralysis of one side of the body can be symptoms.

The medical term for stroke is **cerebrovascular accident**, or CVA.

- Thrombotic/ ischemic stroke (caused by blood clots)
- hemorrhagic stroke (caused by ruptured blood vessels that cause brain bleeding)
- transient ischemic attack (TIA) (a "mini-stroke," caused by a temporary blood clot)
- Embolic stroke – When a blood clot forms in another part of the body and moves to the brain.

Signs/symptoms:

- Numbness, tingling, paralysis on one side of the body, extremities, hands, and feet.
- Slurred speech, not making sense.
- Trouble understanding you.
- Uneven pupils.
- Nausea or vomiting.
- Decreased level of consciousness.

Management:

- Help them get in a comfortable position on their side, make sure they are resting.
- Activate the ambulance.
- Reassure them that help is on the way.
- Keep them warm with a blanket.
- Do not give them anything to eat or drink.

Notes: It is extremely common for people to ignore the warning signs of a stroke. Unfortunately, this is one reason why so many people die from this disease – because they don't get help soon enough. As a first responder, it is your job to activate the ambulance as soon as possible. Sometimes a stroke is called Cerebral Vascular Accident (CVA). Mini stroke is a condition where the casualty experiences similar warning signs as that of a stroke, but these warning signs go away on their own. This is a warning sign that a serious stroke may occur and the person needs medical help immediately. This condition is sometimes called Transient Ischemic Attack (TIA).

Burns

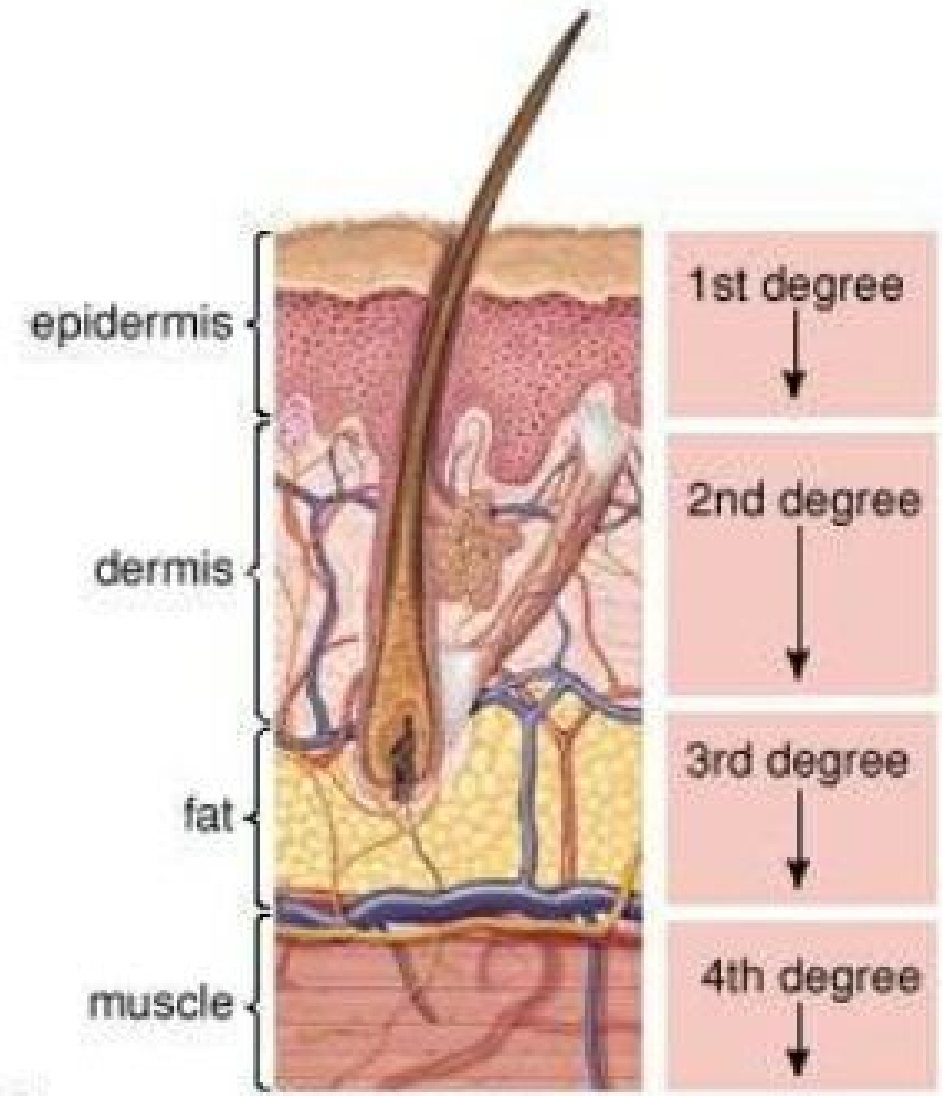
Definition: A burn is damage to the skin or underlying tissue caused by heat. There are 3 levels of severity; 1st (Superficial), 2nd (Partial thickness), 3rd (Full thickness).

Causes: There are 5 main sources of burns;

- Electricity,
- Radiation (sun),
- Thermal (something hot),
- Chemical,
- Friction

Prevention:

- Use safety rules.
- Use safety equipment when working with chemicals.
- Hire professionals for work dealing with e.g. electricity.
- Avoid sun exposure.
- Keep hot objects away from children.



Management:

- For 1st and 2nd degree burns you should cool the area immediately with gently running cold water for about 10-15 minutes, or until it has cooled off. Do not break any blisters as this will make the wound worse.
- For 3rd degree burns do not put anything on the burn, seek medical help immediately and treat for shock. 3rd degree is extremely life threatening even when a small body part is affected. If there is clothing on the burn do not remove it as this may also remove skin. There is a very high risk of infection from this kind of burn.

First Aid for BURNS

1 Cool
with running water

2 Cover
the burn

3 Call
emergency assistant

Notes:

- As with all other emergencies make sure the area is safe for you first. Watch out for live wires, hot objects, chemical spills, etc.
- The severity of a burn can also be increased depending on; Which part of the body is affected, e.g. face, and neck.
- The amount of the body that is burnt, e.g. only fingertip or entire arm.
- With electrical burns check for an exit wound as well as treating for the entrance wound.
- With chemical burns flush the area with lots of water to get it off the casualty's skin.
- Never apply ointments, butter, or other home remedies on burns, as this may make the burn worse, keep the heat trapped in, or cause an infection.

Emergency Child Birth

- Definition: Emergency child birth is defined as a situation where the expecting mother-to-be can not reach medical facilities in time and needs to give birth on the spot.
- Causes: Being away from medical facilities is the most common cause for this situation. Also, not having transportation.
- Signs/Symptoms: If the mother says, "the baby is coming," or the baby's head is showing, or the contractions are less than two minutes apart, then it is time to deliver the baby on the spot.

Management:

- Make sure the ambulance has been called.
- Make the mother comfortable on her back. Remove any necessary clothing but keep her covered to protect her privacy. Put some clean towels under her.
- As a rescuer all you have to do is support the baby as it comes out. Hold the head as it is heavy compared to the rest of the baby.
- As soon as you can see the baby's throat make sure the umbilical cord is not wrapped around it. If it is use your finger to loosen it and pass it over the head. This is easy to do.
- Once the baby comes out wrap it in a clean towel.
- Clean its mouth and nose.
- If it is not breathing massage its back and tickly its feet. This should help stimulate the breathing mechanism.
- If it is still not breathing begin rescue breathing and CPR.
- Never hold the baby upside down and slap it. This is a TV thing, and if you should drop the baby you'll be in trouble.
- If the baby is fine give it to the mother to hold.
- The other end of the umbilical cord will be attached to the placenta which will still be inside the mother. Do not pull, it will come out on its own in a few minutes in another set of contractions.
- Do not cut the cord. Simply wrap the placenta in a towel and keep with the baby.
- Never put the placenta lower than the baby as blood may drain from the baby back into the placenta. If you wish you may tie something around the umbilical cord a few centimeters away from the baby and from the placenta. But do not cut it.
- If the baby begins to come out feet first it is a complication but there is nothing you can do. Instruct the mother not to push. Do not try to push the baby back in. Simply support it any way it comes out.

Heart Attack

- Definition: When something goes wrong with the heart's electrical system, or when an artery in the heart muscle ruptures or becomes blocked. Regardless, the heart is no longer able to circulate blood effectively, including to its own tissues. As a result, the heart may stop working.
- Signs/Symptoms:
- Pain/tightness/numbness in the shoulders, arms, neck, back, chest.
- Bluish, pale skin.
- Rapid but weak pulse.
- Shallow rapid breathing.
- Nausea or vomiting.
- Unconsciousness.
- These warning signs may come and go, and maybe severe or mild. Even if the warning signs go away this person may still be having a heart attack and still needs immediate help.

- Management:
- Help them get in a comfortable position, make sure they are resting.
- Activate the ambulance.
- Reassure them that help is on the way.
- Check for medical history of a similar problem, as they may have medication (but only assist, do not administer medication).
- If they have Angina (see following page).
- If they wish, they may take one Bayer Aspirin, as this may prevent further damage to the heart muscle. Note, if they have asthma they may be allergic to aspirin – ask first!
- Do not give them anything to eat or drink.
- Stay with them all the time and comfort them.
- Notes: It is extremely common for people to ignore the warning signs of a heart attack. Unfortunately, this is one reason why so many people die from this disease – because they don't get help soon enough. As a first aider it is your job to activate the ambulance as soon as possible.

Angina

- Definition:Angina is a serious medical condition, diagnosed by a cardiologist, where the coronary arteries are partially blocked. As a result, when under stress, the heart is not able to get enough blood and cannot work properly.
- Sign/Symptoms: The most common warning sign is pain, but it can also include any of the other warning signs for heart attack.
- If the casualty says they have angina they should also have medication with them. You can help them take it (e.g. get the bottle, open the bottle, put the pill in their hand) but they must do the actual administering.
- Management: This medication is called nitroglycerine. It is designed to cause blood vessel dilation, which means it causes the blood vessels to relax so they expand. As a result, more blood can flow through.
- Viagra does not cure heart disease. It does not dissolve blood clots, it simply enlarges blood vessels temporarily.

- Nitroglycerine comes in 4 forms:
  - Pill: which they must place under their tongue for quick absorption. If they swallow the pill it will take much longer to be absorbed.
  - Spray: like a puffer, which they spray into their mouth.
  - Paste: which they put on their skin.
  - Patch: which they wear all day.
- The most they should take is 3 doses, 3 minutes apart each. If after 10 minutes they do not feel better, or they become worse at any time then it means the medication is not working and this person needs advance medical help immediately.

Cardiopulmonary resuscitation:

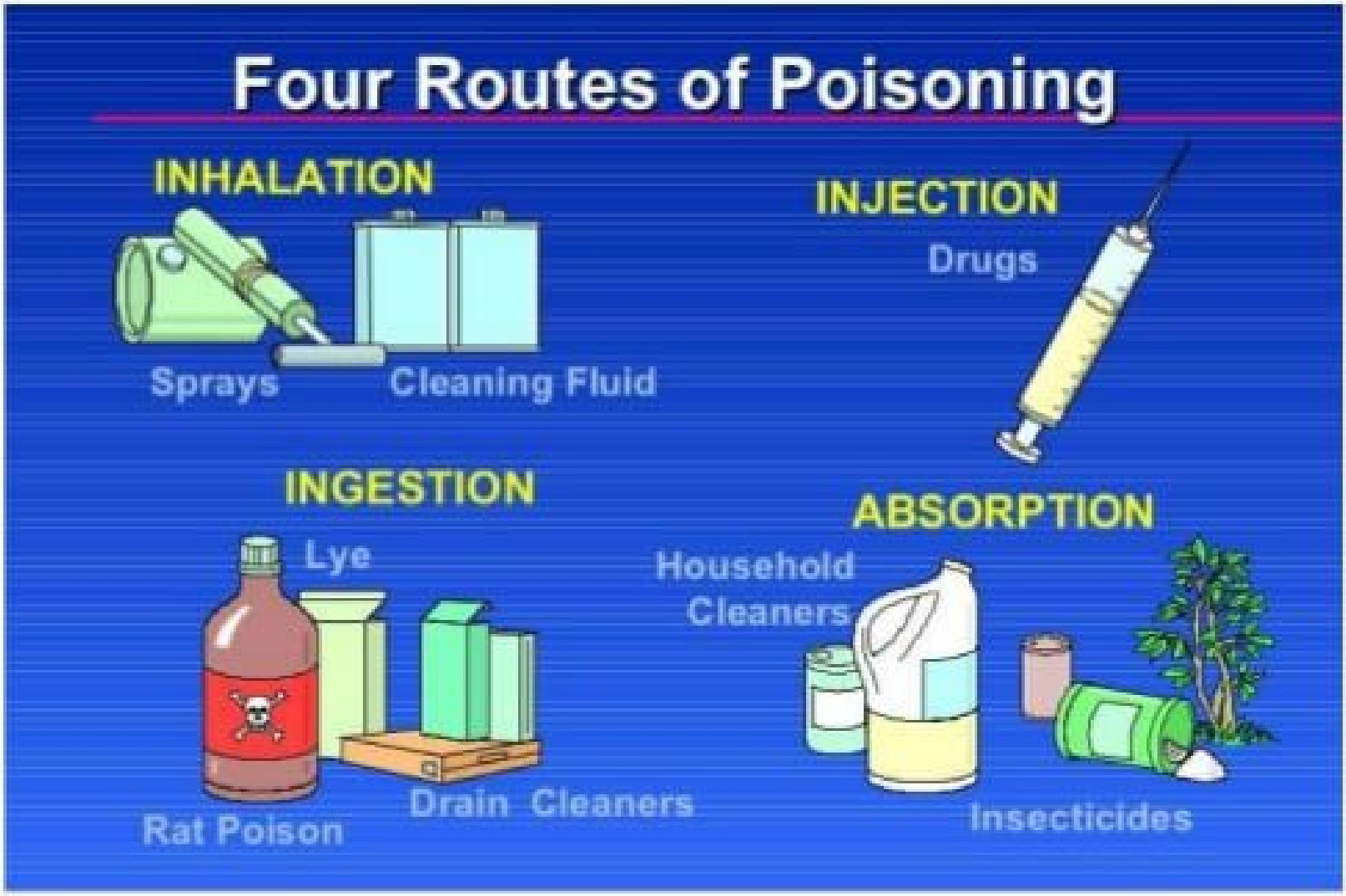
- **Airway:**
- Place them on their back, carefully so as to not cause any injury.
- Open their airway by tilting their head back and lifting their chin upwards. This will remove the tongue from blocking the airway.
- Keep the airway open.
- **Breathing:**
- Check for Breathing by looking, listening, and feeling for air (10 seconds).
- If they are breathing then monitor and put them in the recovery position until the paramedics arrive.
- If they are not breathing give them 2 breaths, allowing the air to come out in between.
- If the air goes in then go to "Circulation."
- If the air does not go in, re-position the head-tilt/chin-lift a bit further back and try blowing again. Be careful not to injure their neck.
- If the air still does not go in then go to "Circulation" but check the mouth for the food after doing CPR.

- **Circulation:**
  - Start CPR if needed (compressions and breaths).
  - It is 30 compressions to 2 breaths. Continue until paramedics arrive or until something changes with the person (reassess at this point).
  - If the air was not going in make sure you check the mouth, to see if the food came out, after each set of compressions. If you see the object in their mouth take it out and reassess breathing.
  - Under this category, we are also concerned with shock and severe bleeding.

- **About compressions:**
  - Adult: use both hands. Compress 4-5 cm deep.
  - Child: use one hand. Compress almost half way down.
  - Infant: use two fingers. Compress almost halfway down.
  - Fast and smooth.
  - Do not stop unless something changes.
  - Ribs may break, keep going.
  - If they vomit roll them onto their side, clean their mouth, continue.
- **Two-Rescuer CPR:** In a situation where there are 2 trained first aiders, and they work well together, one rescuer can perform the compressions while the other rescuer gives the breaths. All the steps are the same, nothing changes. This is a bit more sufficient and less tiring for the rescuers. If the rescuer doing the compressions becomes tired they can switch positions.

Poisoning:

- **Definition**: A poison is a substance which enters the body and can cause illness or death. It may act within a matter of seconds (e.g. carbon monoxide) or a matter of years (e.g. car pollution). There are four basic ways in which poison can enter the body; by swallowing, breathing, injecting, or absorbing. Any of these methods can be life threatening. Many times children are the innocent casualties.


Four Routes of Poisoning
INHALATION
Sprays
Cleaning Fluid
INJECTION
Drugs
INGESTION
Lye
Rat Poison
Drain Cleaners
ABSORPTION
Household Cleaners
Insecticides


POISON

Ingested Poisons:

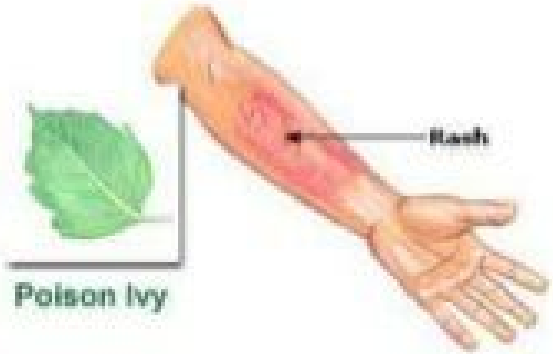
- Examples can include bad food, household cleaners, perfumes, nail polish remover, etc.
- If the person is having trouble breathing, is convulsing, is unconscious, or is in pain, call the ambulance immediately.
- If the person appears to be fine but you want to make sure call your doctor or local hospital.
- For your area this number can be found at the front of your local telephone directory. In order for them to help you they need to know what the person took, how much, their age and weight, and their present condition. They will either tell you to seek medical help immediately, give them something to drink, or to monitor them to make sure they don't get worse.
- Make sure you do not induce vomiting unless you are told to do so by a physician as some substances are corrosive and may burn on the way up.
- Also, do not give anything to drink unless instructed by a physician as some substances may react more with liquids.
- Always keep cleaners and chemicals high up so children can not access them.

Breathed/Inhaled Poisons:

- This can include fumes from household cleaners, industrial products, smoke, etc.
- Fresh air is the immediate first aid treatment.
- But first make sure you are not putting yourself in danger. Seek medical help for the person immediately.
- Never mix cleaners unless it specifies on the container. Never use chemicals in poorly ventilated areas.
- Be aware of carbon monoxide as it can not be smelled, has no taste, and can not be seen. It can be produced by any engine (e.g. house furnace, car), or even a fireplace with poor ventilation.
- Every home should have a carbon monoxide detector. If the detector begins to sound you need to leave the house immediately and call the fire department from the neighbor's house.
- Carbon monoxide poisoning makes you feel sleepy and drowsy and can have an effect in a matter of minutes so you aren't aware of what is happening.

Injected Poisons:

- Some examples include needles, broken glass, mosquitoes, spider bites, bee stings, etc.
- As soon as possible remove the object from the skin. Clean the area thoroughly with soap and water.
- If an allergic reaction occurs, or you believe there is a risk of infection, seek medical help.


Rash
Poison Ivy

Absorbed Poisons:

- These are poisons which enter the body through the skin, but do not cause a puncture. Some examples are household cleaners, industrial products, poisonous plants, etc.
- Remove the substance as soon as possible by using large amounts of running water.
- Do your best not to contaminate other body parts.
- There are some chemicals that will react more with water, but if you leave them on the skin they will react anyway with skin moisture.
- Seek medical help. If you work with chemicals make sure you know how to do the job safely and always use safety equipment.

- **Common household poisons that can harm babies and children:**
- Nail polish and nail polish remover.
- Lipstick and lip gloss.
- Mascara.
- Medication including: Panadol, Tylenol, Aspirin.
- Vitamins or other supplements.
- Cleaning supplies: e.g. bleach.
- Aerosols and other insect repellents.
- Poisons used for insect and pest control.
- Soaps: dishes, hands, clothes, etc.
- Smoke from smoking.

Bites and stings:

Signs/Symptoms: Wound (animal or human bite) or swelling and pain (insect sting).

Treatment:

- For animal and human bites, cleanse wound with soap and water and apply iodine containing antiseptic; submit animal for rabies test.
- Prevent exertion and taking of stimulants by victim. For insect stings apply cortisone ointments, soothing lotions, or cool compress.
- Persons who are allergic to insect stings should carry adrenaline with them at all times.

Snake bite: Not all snakes are poisonous, but if you get bitten by a poisonous one you better rush to medical help immediately. Because snake anti-venom depends on the type of snake that caused the bite, if you can, try and remember the color and pattern of the snake so they can identify it and give you the correct anti-venom.

Treatment:

- Have the person rest with the bitten body part lower than the heart.
- For poisonous snakebite, cooling the site of the wound with ice will slow down absorption of poisons; antivenin treatment is required only for a small number of reptile bites.
- Seek medical help as soon as possible.
- If the person becomes unconscious begin the Primary Survey.

Prevention:

- If you will be in an area where there may be snakes;
- Wear high boots that cover your calves.
- Make noise with your feet as you walk to scare off any snakes.
- If there are trees look on the branches as you walk.
- Check ahead of time what types of snakes might be in the area. So if a bite does occur you can notify the hospital what kind of snake it was.
- Check ahead of time with local hospitals to see if they do have snake anti-venom.

Notes:

- Unless you want poison in your mouth do NOT cut the bite site and suck the blood out.
- Do not try to catch the snake it will bite again.
- There are many snake bite kits on the market, all designed to suck the poison out.
- This may work somewhat, but, blood flows very quickly and the poison may spread very quickly.
- Do NOT tie a tourniquet to try and stop the blood from flowing. This may cause death to the limb from lack of blood flow.

Insect bite: These are tiny insect-like bugs that live in the woods and can easily fall on you as you walk by. They are very small, you don't feel them, and they are very hard to see. They burrow slightly under the first layer of the skin and stay there. The biggest problem is that many times they carry diseases such as Rocky Mountain Fever, or Lyme disease.

Signs/Symptoms:

- Red, itchy hives.
- Swelling.
- Numbness or pain in muscles and joints.
- Flu-like symptoms.
- Heart palpitations.
- Death can occur from untreated diseases from ticks.

Treatment:

- If possible consult a physician for tick removals, as tearing it may contribute to the spread of a virus or bacteria.
- Remove the tick using tweezers. Make sure you get all of it.
- Remove from the head and make sure the entire tick is removed fully intact.
- Do NOT tear or crush the tick.
- Do NOT use a match or any kind of fluid to remove the tick.
- Wash the area with soap and water.
- Seek medical help (family doctor) to obtain anti-biotics.

Prevention:

- When doing outdoor activities wear long sleeve clothing, a cap, and long pants.
- After the activity take a few minutes and examine self or each other for ticks, they usually end up on the scalp, shoulders, or upper back.

Scorpion bites: Generally scorpion can be seen in the moist dark places and in rainy season. Though the scorpions are not seriously poisonous but sometimes persons can become unconscious

Signs & Symptoms:

- Severe burning
- Intolerable increasing pain in the bitten area
- Giddiness
- Vomiting
- Unconsciousness

Management:

- Patient should make to lie comfortably and soothing cream applied.
- If the patient is unconsciousness, send him to doctor or hospital
- If a big blister is seen after 6-12 hours and it burst by itself, do the dressing with antibiotic cream

Dog Bite: A rabid animal is aggressive, drooling saliva, must be approached with care. The mostserious infection risk is rabies, a potentially fatal viral infection of the nervous system. The virus is carried in the saliva of the infected animal. Tetanus is also a potential risk following any animal bite. The dog should be watched for 10 days. If the dog is healthy after this period then there is no danger of rabies.

Symptoms:

- Headache, nausea, vomiting, fever.
- Restlessness, confusion.
- Difficulty in swallowing.
- Foul smelling of the mouth.
- Hydrophobia
- Difficultyin drinking water.
- Aerophobia
- Respiratory paralysis.

Management:

- Thorough washing of the bitten area and wash the wound with soap and water (Detergent solution) for 5-10minutes.
- Dress the wound with clean sterile gauze or cloth. Apply antibiotic cream
- Shift the causality immediately to the hospital
- The dog should be kept under observation for 10 days

Cat bite: Cats keep roaming around the houses but if they are disturbed and touched they becomeVIOLENT and can attack. It causes two types of wounds

- 1. On biting with teeth 2. Scratches by the nails
- Management:
- Wash the wound and apply the dressing properly.

Rat bite: Rats are harm to the human being in different ways.

- The flea found on their body spread a dangerous disease called plague.
- Sometimes they scrap the palm of the hand or foot of sleeping person

Signs and symptoms: Fever

Management:

- Wound should be washed and dressed properly
- Patient should be sent to the hospital

Ticks and Mites bites:Tick is a small insect like bed bug. It is about half or one centimeter long. It has a terrible capacity to stick to the body and keep sucking the blood during this period it spreads germs of certain diseasesin the body by which tuloramie, Rocky Mountain spotted fever.

Signs & Symptoms: Typhus Fever

Management:

- The tick or mite has bitten and it is sticked should be immediately removed.
- Should be pulled force fully
- Apply burning cigarettes on the dorsal surface.
- Apply oil turpentine or kerosene to remove the tick or mite.
- The wound should be washed with soap and water
- Apply antibiotic cream
- Apply bandage

Spider bite:

- There are 2 types of spider. 1. Black spider 2. Tarantula
- Black spider is more poisonous. Tarantula is big, hairy and less poisonous.

Signs and Symptoms:

- Redness
- Severe pain
- Local swelling
- Stomach cramps
- Muscle hardness
- The face, legs and hands looks swollen
- Breathlessness and shock

Management:

- Patient should be made to lie in a comfortable position
- Should be covered with blanket or bed sheet
- A cloth or rope should be tight at a distance from the bitten area. So, the blood is not absorbedin other parts of the body.
- If the patient is conscious, give coffee or tea to drink.
- Bitten area should be clean and bandage
- Sent him to the hospital.

Leech bite:

- Leech is generally found in tanks, rivers, moist and muddy places. It sucks quite a large amount of blood.

Management:

- Apply a burning stick or cigarette on the dorsal surface.
- Wash the wound and apply bandage.

Fish stings:

- Two breeds of thorny fish viz sting ray fish and jelly fish and generally harm to the humans by stinging.

Signs & Symptoms: Severe pain

Management:

- The sting should be take it out by scratching the skin.
- Wash the wound and do the dressing
- Apply cold bandages of ammonia and water to get relieve from the burning sensation
- If the pain is severe, get the medical aid.


OphthoBook.com

Foreign body in eyes:

- Foreign body in the eyes may be dust, small particles of wound, stone, coal, glass or an insect.

Signs/Symptoms: Pain, redness, burning, tears.

Management:

- Pull down lower lid and remove unembedded object with clean tissue if it lies on the inner surface of lower lid.
- If object has not been located, pull upper lid forward and down over lower lid.
- Object can be removed from surface of upper eyelid by turning lid back over a swab stick or similar object and lifting off the foreign body with a clean tissue.
- Finally, flush the eye with water.
- If object is suspected to be embedded, apply a dry, protective dressing over eye, and call physician or take patient to hospital emergency room.
- Keep victim from rubbing the eye. For chemical burns, flood eyes with water.


www.drrahmatorlummc.com

Foreign body in the nose:

- Usually peas, beans, piece of pencil are put into the nose by children.

Signs/Symptoms: uncomfortable, complains of pain, inability to breath

Management:

- Make the victim to sit
- Ask the victim to breathe through mouth to prevent foreign body to aspirate in to respiratory tract from nose.
- Make the patient sneeze by passing the end of a piece of thread in the opposite nostril.
- Do not attempt to remove it with a pin or a hook.
- Seek medical help

Foreign body in the ears:

- Peas, beans, piece of slate pencil can be pushed by children during play.Sometime insect also can be present.

Signs/symptoms: pain blocked ear, ringing in the ear

Management:

- Put warm oil in the ear to float out an insect.
- Do not attempt to remove any other form of foreign body as the tympanic membrane may be damaged during such attempts.
- Take the patient to a doctor.


© 2009 Logical Images, Inc.

Foreign bodies in the skin:

- Small foreign bodies (wood splinters, shards of glass) usually cause minorpuncture wounds with little or no bleeding. If foreign bodies deeply embedded in a wound is not be removed by a first aided, it may cause further injury.

Splinters: Small splinters of wood, metal or glass in the skin particularly of the hands, feet and knees are common injuries. It should be drawn out by using tweezers.

Management:

- Clean area around the splinter with soap and water
- Sterilize a pair or tweezers by passing them through a flame
- Grasp the splinter as close to the skin as possible
- Squeeze the wound to encourage a little bleeding
- Apply an adhesive dressing "plaster"

Foreign body in throat (Chocking)

Choking (Asphyxia due to obstruction in wind pipe): This is most common with children. A marble, a seeds, coin, weed or a button may get stuck in the air passage. In adults too, food may go down the wrong way and cause choking.

Signs/Symptoms: difficulty in breathing, talking, and swallowing.

Treatment:

Steps to Unconscious Choking

- Ask them if they are choking.
- Ask them if you can help.
- Step behind them and do abdominal thrusts (chest thrusts if they are big or pregnant).
- Continue until the food comes out or until they become unconscious.
- If the food comes out make them comfortable and activate ambulance if they need it.
- If they become unconscious;
- Carefully lay them on the ground.
- Get someone to call for an ambulance.
- Perform a tongue-jaw-lift.
- Check the mouth for the food.

Airway: Open, and maintain, their airway by tilting their head back and lifting their chin upwards.

Breathing:

- Check for Breathing by looking, listening, and feeling for air (10 seconds).
- If they are not breathing give them 2 breaths, allowing the air to come out in between.
- If the air does not go in, re-position the head-tilt/chin-lift a bit further back and try blowing again. Be careful not to injure their neck.
- If the air still does not go in,
- Start CPR 30 compressions.
- After 30 compressions perform a tongue-jaw-lift and check the mouth for the foreign object.
- Remove the object if you see it.
- Give them 2 breaths.
- Go to step 3.
- Repeat steps 5 to 10 until air goes in. Once air goes in then go to Circulation below.

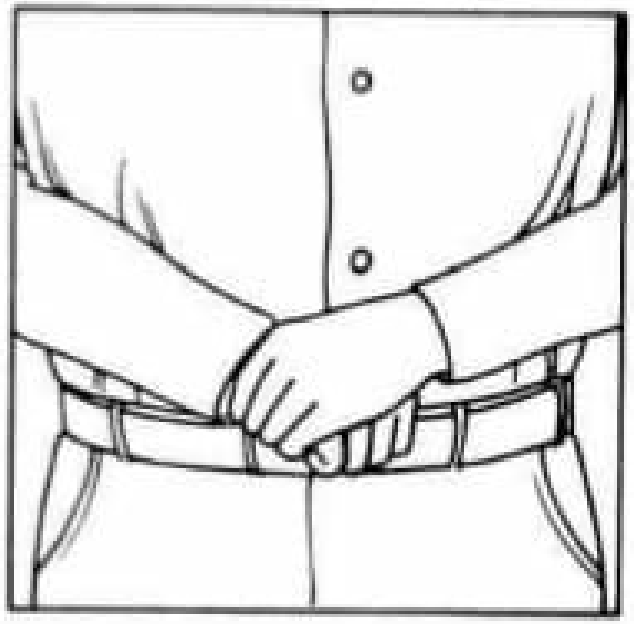
Circulation:

- Start CPR; 30 compressions to 2 breaths.
- Continue until paramedics arrive or until something changes with the person (reassess at this point).

Steps to Conscious Choking Adult / Child

- Ask "are you choking?"
- Ask "can I help you?"
- Step behind them and do abdominal thrusts (chest thrusts if they are big or pregnant).
- Continue until the food comes out or until they become unconscious.
- If the food comes out make them comfortable and activate ambulance if they need it.
- If they become unconscious;

- Lay them down.
- Call for an ambulance.
- Check their mouth for the food.
- Follow the steps for Unconscious Choking (above).



- **Notes:**
  - The thrusts need to be quick and forceful. And if unsuccessful, the force needs to be increased.
  - If they are visibly pregnant, or you can't get your arms around their abdomen then you must do chest thrusts on the breast bone.
  - If they are considerable shorter than you, such as a child, kneel down behind them and do the exact same thing.
  - Never pick up a child to put them on a table or a chair simply because you don't want to kneel down.
  - After wards, this person should go see a doctor to make sure there was no internal damage done during the procedure.
  - If the victim swallowed a sharp object, e.g. safety pin, nail, false teeth etc. get the doctor immediately. If delay is inevitable, give a cotton- wool sandwich, i.e. a layer of cotton wool between bread when given, coat the sharp object and make it harmless.
  - Do not give purgatives
  - Examine stools next day for the foreign body

Conscious Choking Infant:

- Lay them on your arm face down and give 5 back blows.
- Turn them over face up and give 5 chest compressions.
- Continue until the food comes out or until they become unconscious.
- If the food comes out make them comfortable and get medical help if they need it.
- If they become unconscious;

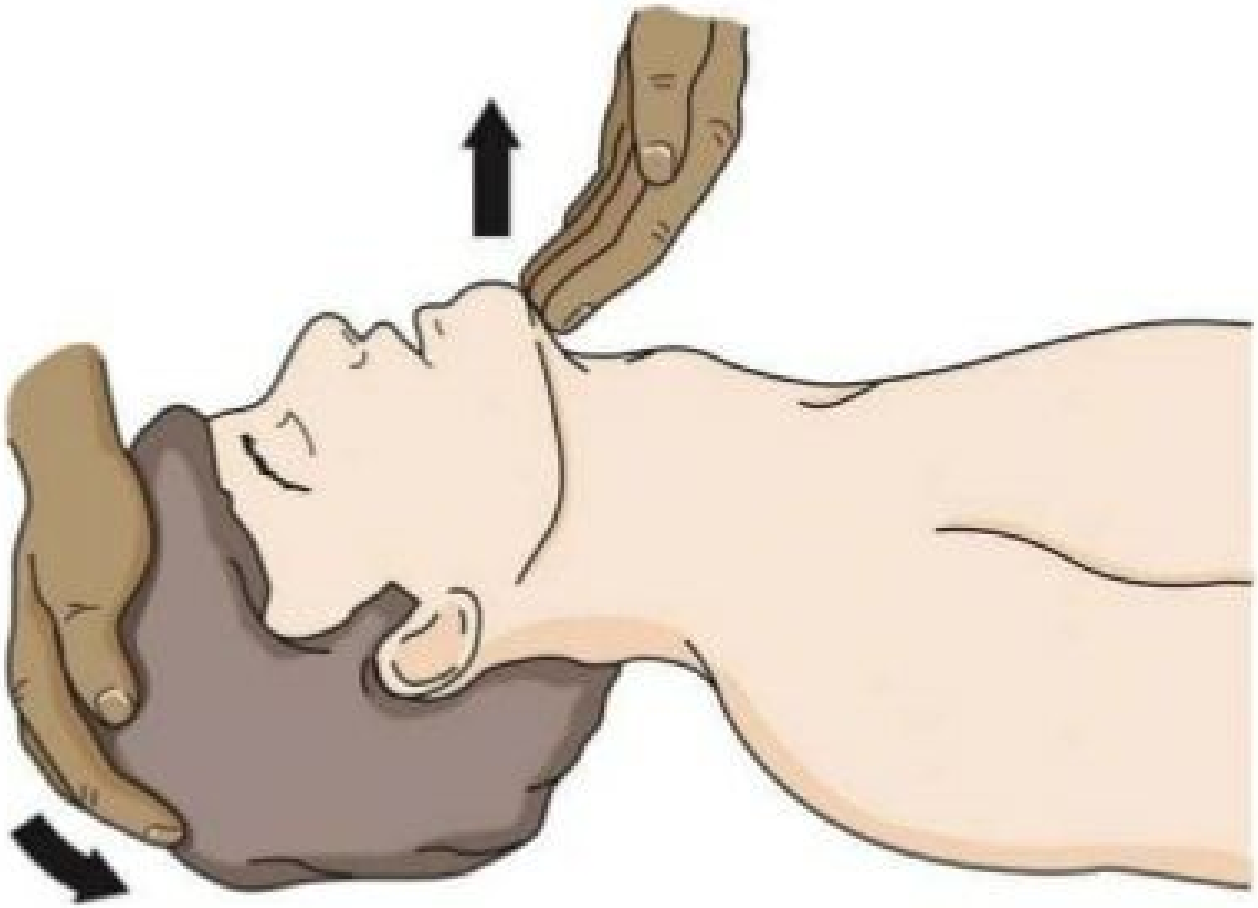
- Lay them down.
- Activate ambulance.
- Check their mouth for the food.
- Follow the 3 Cs explained above.

Note:

- Hold the baby securely so that they don't slip and fall.
- Once the food comes out take the baby to a doctor to check for any injuries that may have occurred from the rescue attempts.
- Never shake a baby upside down to try and remove a choking object.
- Always support the head, as they do not have developed neck muscles yet.

Head/tilt-chin/lift:

- This is done in order to lift the tongue off the throat so as to open the airway. It is done by placing one hand on the forehead and pushing the head back, and by placing one finger on the underside of the chin and lifting the chin upwards.
- If you suspect a neck injury then you should open the airway using the modified jaw thrust, without the head tilt.



Tongue-jaw lift:

- This is done when you want to see if there is food inside an unconscious person's mouth.
- It is done by opening their mouth and grabbing their tongue (like a tongue depressor) with your thumb. Now you can see inside their mouth.
- If you see an object use your other hand to pull it out.
- Never put any foreign objects, e.g. tweezers, inside their mouth to pull out the object.
- If the object is liquid or hard to get out, turn the person on their side and try scooping it out from this position.

Figure 2-25. Opening casualty's mouth (tongue-jaw lift).

- **Reference**:
- Marian Aldana . The Importance of First Aid. Seton blog. June 10, 2013.
- Maheshawari L. Essentials of first aid for nurses" Jaypee publication. 2012.
- Swapan N.W. Mala,G. "First aid and emergency care" Kumar publishing house.3rd edition. 2013.
- First aid kit "American red cross"
- The Columbia Electronic Encyclopedia, 6th ed. 2012, Columbia University Press.
- Firstaid.cpr.net.