



FIRST AID COURSE

FIRST AID

PURPOSE

To keep the victim alive until specialised health professionals arrive



ADAM.

FIRST AID

INITIAL STEPS

- Remain calm.
- Understand how to take charge.
- Avoid crowds.
- Do not move the patient unless it is absolutely necessary.
- Assess situation quickly.
- Maintain body temperature.



PROCEDURES IN AN EMERGENCY

P.N.A.

1.- **P**rotect



2.- **N**otify



3.- **A**id



Steps to follow if people have been hurt in an accident.

PROCEDURES IN AN EMERGENCY

P.N.A.

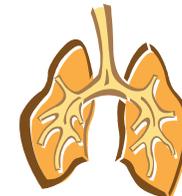
P.N.A. “PROTECT AND ASSESS”

- Self-protection.
- Protect the area.
- Protect the victim.



- ◆ **Fast initial assessment:**

- Type of accident
- Approx. no. of victims
- Severity of the wounds, 'vital signs'



The best information can be provided about the situation when notifying others.

PROCEDURES IN AN EMERGENCY

P.N.A.

P. N. A. “NOTIFY AND ALERT”

Where?

- Medical emergencies 061
- Emergencies 112



Who?

- Any person who is properly notified about the situation.



PROCEDURES IN AN EMERGENCY

P.N.A.

P. N. A. "NOTIFY AND ALERT"



What to say?

- **Identify yourself** (Name, telephone number and where you are calling from).
- Speak clearly and do not hang up the telephone until the other speaker does so.
- The exact location of the accident.
- Description of the accident or incident.
- Approx. no. of victims and their condition.
- Circumstances that may aggravate the situation.

PROCEDURES IN AN EMERGENCY

P.N.A.

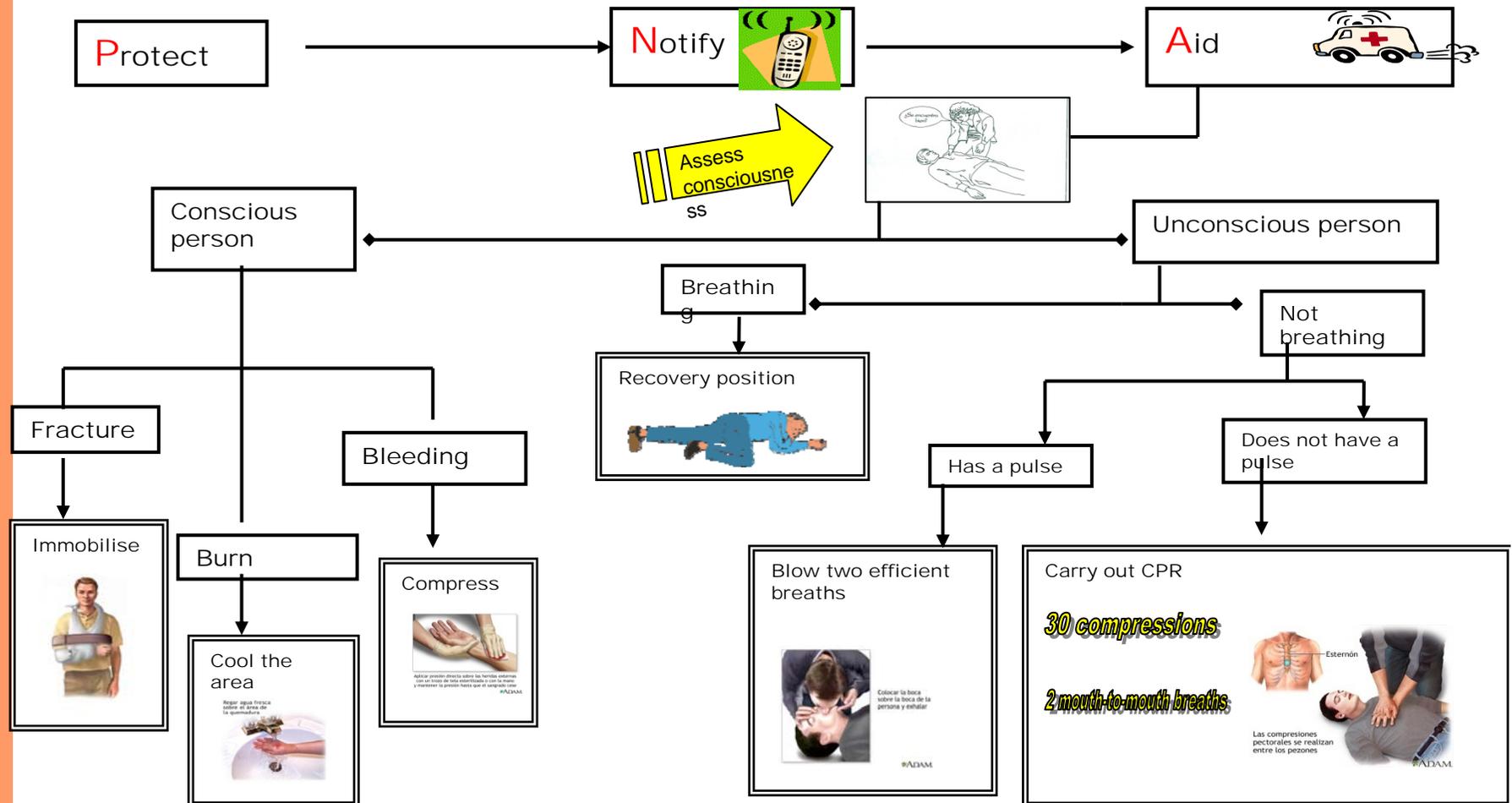
P. N. A. "AID"

- Act quickly but remain **calm**.
- Always consider the possibility that there may be hidden victims.
- Do not attend to the first victim you see or the one who is screaming most. Follow an order of priority.
- **Do not move** the victim, especially if you suspect s/he is injured.
- Do not attempt to remove foreign bodies from wounds.
- Keep the victim **covered** to avoid hypothermia.
- Periodically monitor patient progress: level of consciousness, breathing difficulty, bleeding starting again, shock.
- Record progress data about injured people and properly notify health professionals once they arrive.

PROCEDURES IN AN EMERGENCY

P.N.A.

If you experience an accident, remember!!!!!!!



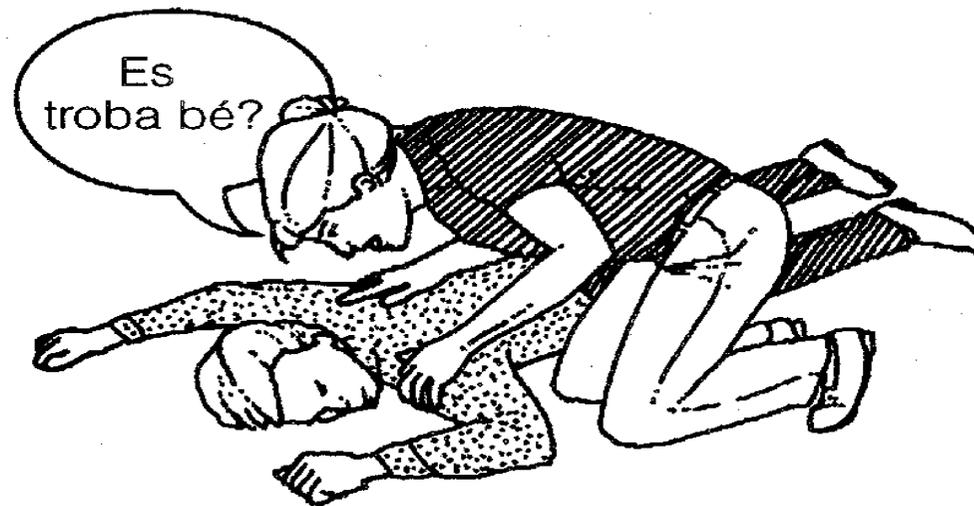
FIRST AID

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PROCEDURES IN AN EMERGENCY

ASSESSING VITAL SIGNS

1.- CONSCIOUSNESS: Stimulate the victim, speak to him/her and move his/her shoulders gently to see if the victim reacts.



Exploració de la consciència

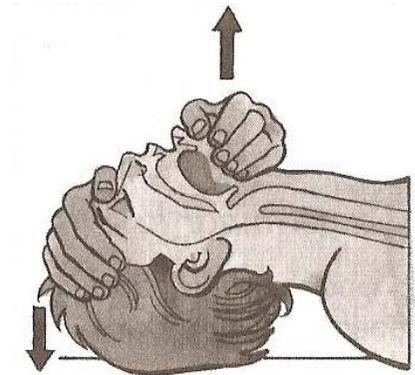
PROCEDURES IN AN EMERGENCY

ASSESSING VITAL SIGNS

2. BREATHING :

“OPENING THE AIRWAY” (head tilt/chin lift maneuver)

With one hand on the victim's forehead and the other on the lower jawbone, tilt the head back by bending the neck, which will open the airway.

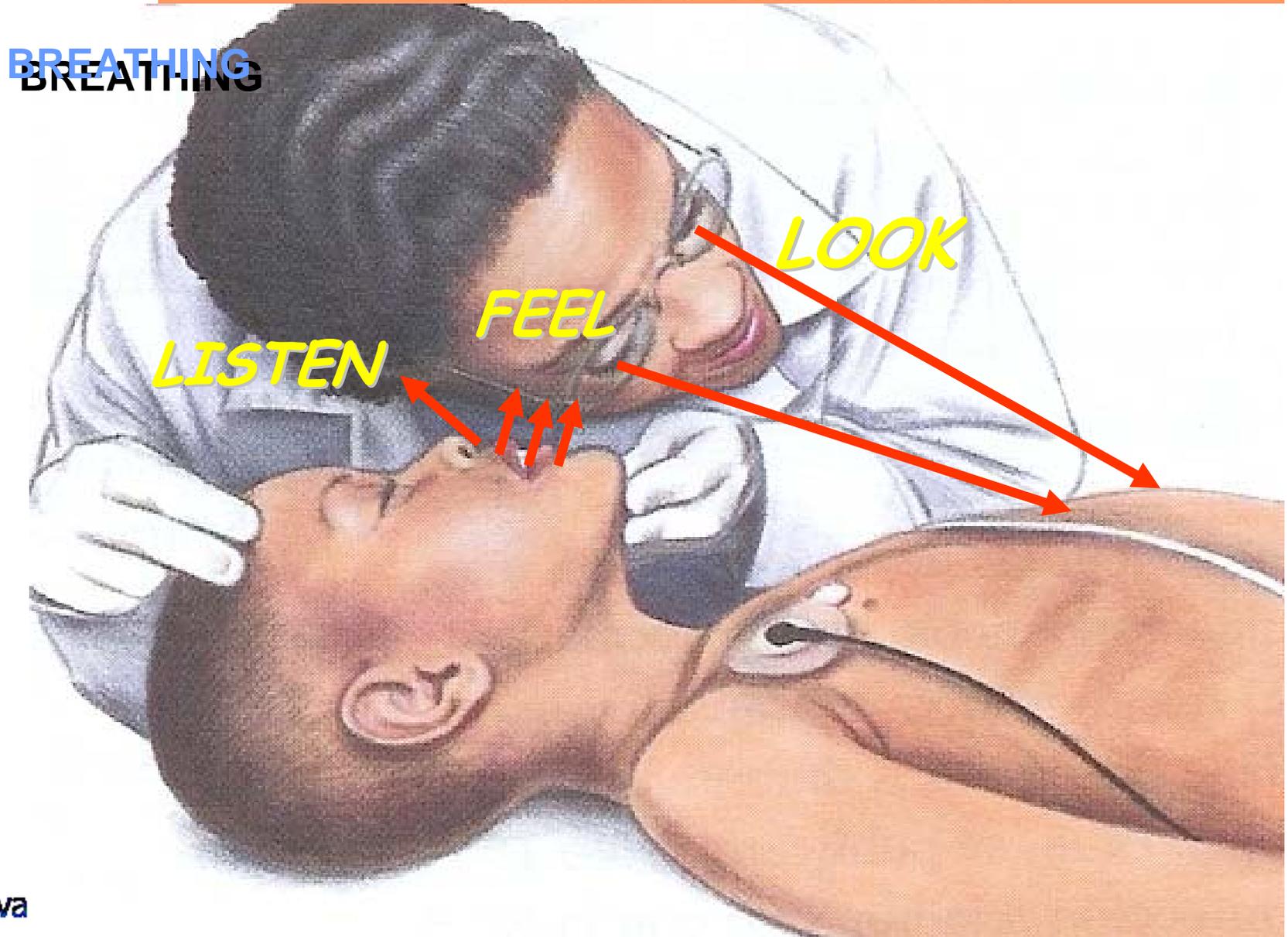


Make sure there are no foreign bodies in the victim's mouth.

PROCEDURES IN AN EMERGENCY

ASSESSING VITAL SIGNS

BREATHING
BREATHING



PROCEDURES IN AN EMERGENCY

ASSESSING VITAL SIGNS

Check **breathing** quickly (a maximum of 10 seconds), given that a person can live:

3 weeks without eating

3 days without drinking, but

no more than 3 minutes without breathing.

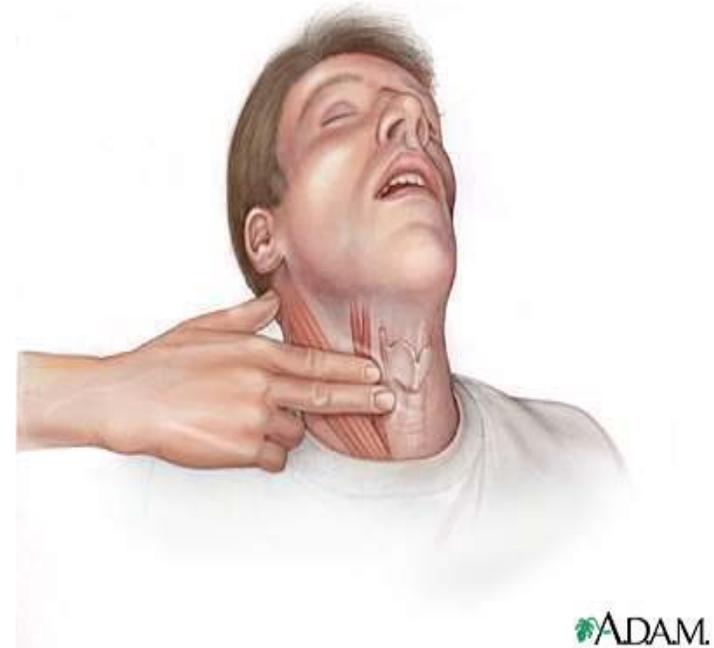


PROCEDURES IN AN EMERGENCY

ASSESSING VITAL SIGNS

3.- PULSE:

- Place the 2nd and 3rd finger on the Adam's apple and move it from side to side.
- **NO MORE THAN 10 SECONDS!!**



PROCEDURES IN AN EMERGENCY

STABLE RECOVERY OR COMA POSITION

Appropriate position for victims who are
UNCONSCIOUS
NON-TRAUMATIC
with a **PULSE AND BREATHING.**



This allows the victim's airway to remain clear and to attend to other victims or to notify others if necessary.

PERIODICALLY CHECK pulse and breathing.

PROCEDURES IN AN EMERGENCY

BASIC LIFE SUPPORT

THE PURPOSE OF CPR

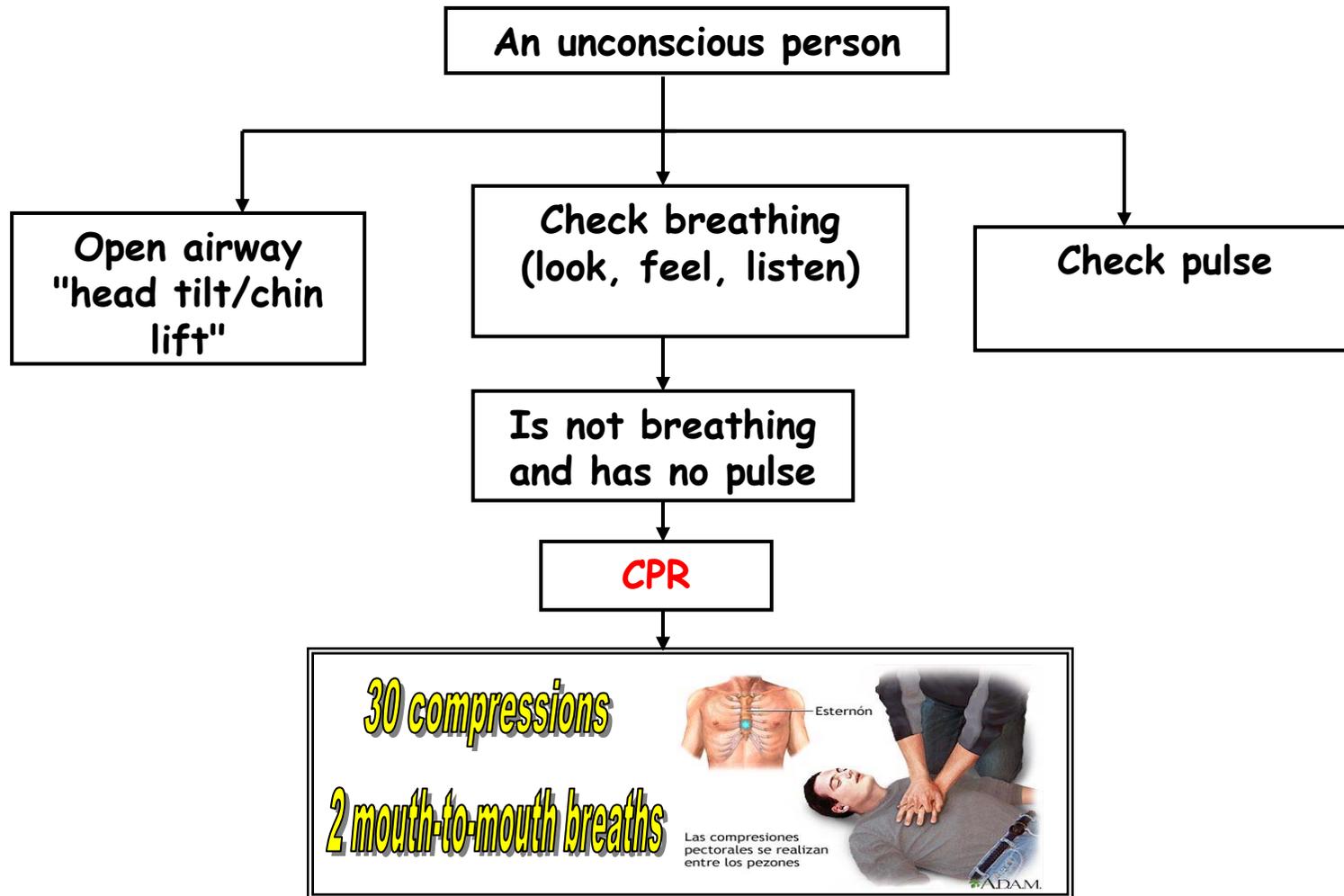
"Cardio- Pulmonary Resuscitation"



- When a victim experiences cardiac arrest, blood does not flow to the brain, heart and all other organs. If you are **not** able to re-establish breathing or circulation, every minute that passes decreases the chance of survival and increases the risk of death or permanent disability.

PROCEDURES IN AN EMERGENCY

BASIC LIFE SUPPORT

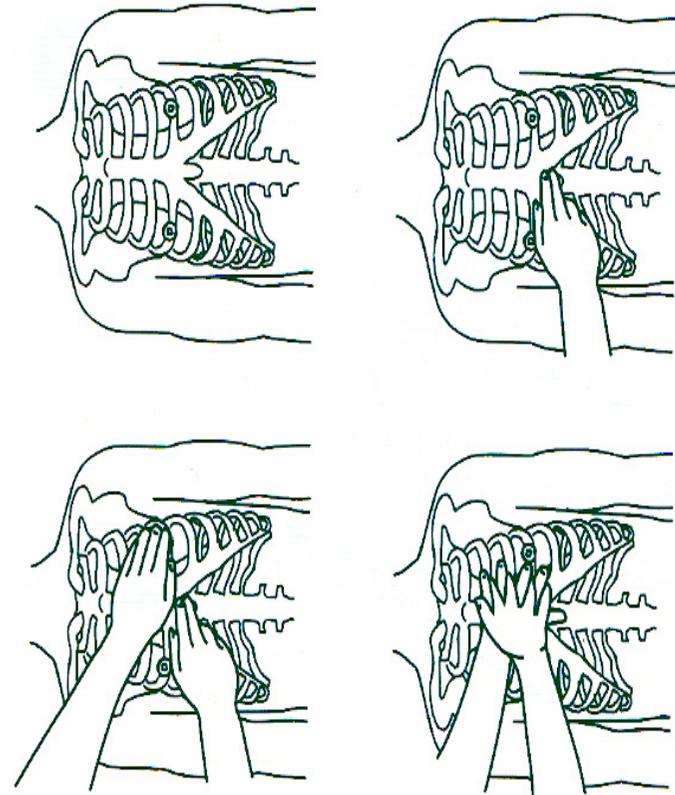


PROCEDURES IN AN EMERGENCY

BASIC LIFE SUPPORT

CHEST COMPRESSIONS

- Follow the edge of the ribs until you reach the join of the sternum.
- Two fingers above this area place the heel of your hand on this point.
- Place the other hand on top and intertwine your fingers.

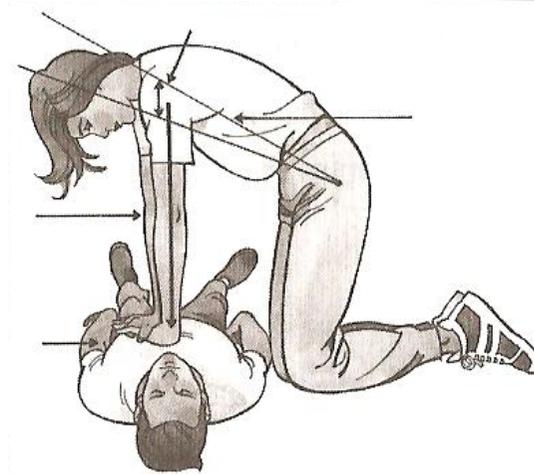
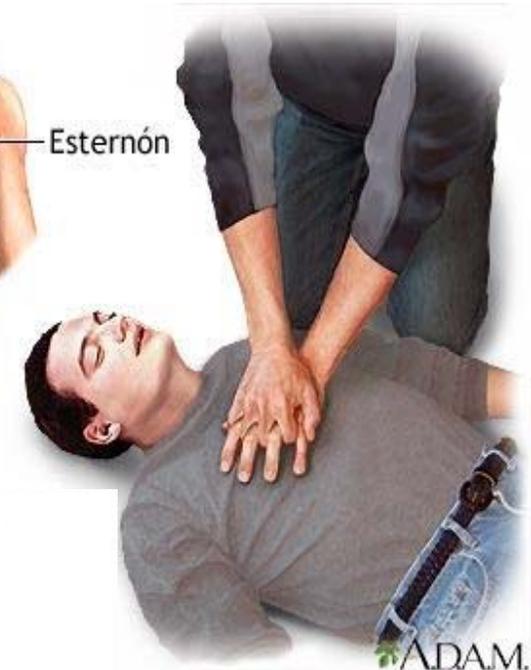
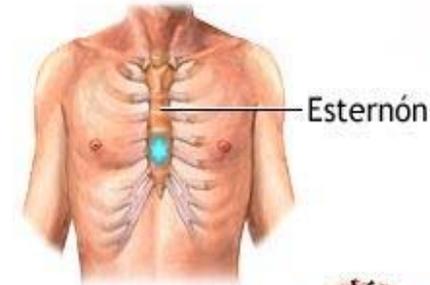


PROCEDURES IN AN EMERGENCY

BASIC LIFE SUPPORT

CHEST COMPRESSIONS

Ensure your arms are straight and allow your weight to fall onto the victim's chest 4-5 cm.

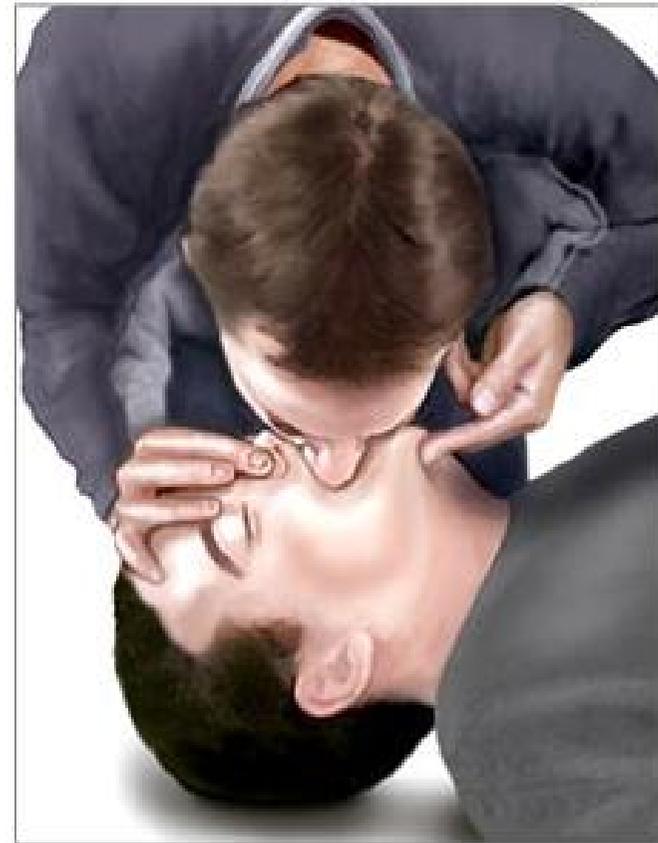


PROCEDURES IN AN EMERGENCY

BASIC LIFE SUPPORT

EFFICIENT MOUTH-TO-MOUTH BREATHS

- Close the victim's nose with the hand you have placed on the forehead. Breathe air in and seal the victim's mouth.
- **Watch for the chest to rise.**



PROCEDURES IN AN EMERGENCY

BASIC LIFE SUPPORT

30:2 SEQUENCE

30



2

CHANGES
TO
CONSCIOUSNESS

- 1.- FAINTING
- 2.- COMA

PROCEDURES IN AN EMERGENCY

CHANGES TO CONSCIOUSNESS

1.- FAINTING (black-out)

The victim loses consciousness for a **brief** period of time, due to a decrease of blood flowing to the brain.

PROCEDURES IN AN EMERGENCY

CHANGES TO CONSCIOUSNESS

SYMPTOMS OF FAINTING

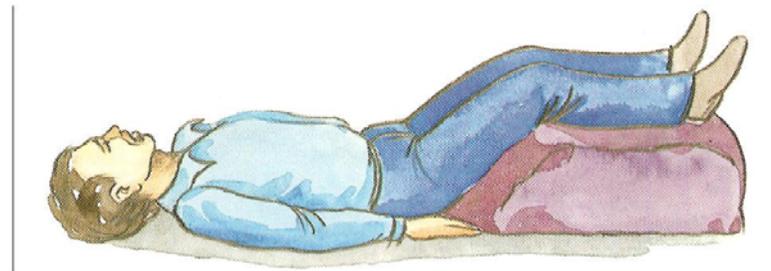
- Dizziness.
- Weakness in legs.
- Pins and needles in extremities.
- Cold and sweaty skin.
- Fast and weak pulse.

PROCEDURES IN AN EMERGENCY

CHANGES TO CONSCIOUSNESS

HOW TO RESPOND SHOULD SOMEONE FAINT

- Supine position.
- Keep the airway clear using "head tilt/chin lift".
- Lift legs approx. 45°.
- Loosen clothing.
- If the victim vomits, place him/her in the recovery position.



PROCEDURES IN AN EMERGENCY

CHANGES TO CONSCIOUSNESS

2.- COMA

The victim loses consciousness for a **prolonged** period of time and the victim does not respond to external stimulation.

PROCEDURES IN AN EMERGENCY

CHANGES TO CONSCIOUSNESS

CAUSES OF A COMA

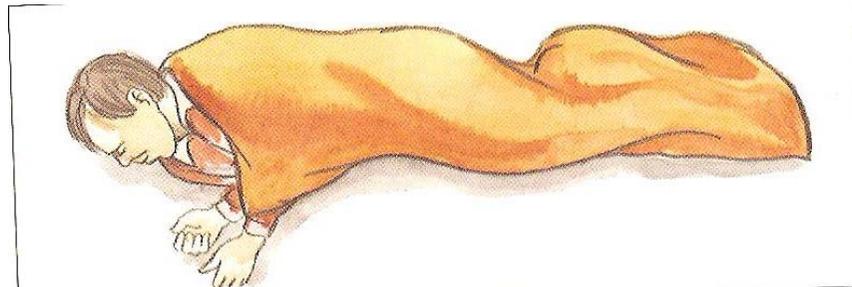
- Trauma.
- Intoxication (alcohol, drugs...)
- Metabolic changes (diabetes).
- Neurological changes (epilepsy).

PROCEDURES IN AN EMERGENCY

CHANGES TO CONSCIOUSNESS

HOW TO RESPOND TO A COMA

- Supine position.
- Open airway:
 - If the victim is not breathing, begin CPR.
 - If the victim is breathing, place in the recovery position.
- Cover the victim.
- Notify.



AIRWAY OBSTRUCTION

1. CONCEPT
2. TYPES
3. USING THE "Heimlich Manoeuvre"

PROCEDURES IN AN EMERGENCY

AIRWAY OBSTRUCTION

AIRWAY OBSTRUCTION

This usually occurs when a foreign body has entered the respiratory passage, preventing air from passing through, which can then hamper breathing.

PROCEDURES IN AN EMERGENCY

AIRWAY OBSTRUCTION

TYPES OF OBSTRUCTION

- **Complete obstruction:**
 - ✓ Complete airway blockage.
 - ✓ The victim cannot cough or speak.
 - ✓ The victim grabs at his/her throat and becomes very agitated.
- **Partial obstruction:**
 - ✓ Hampers breathing but does not prevent it.
 - ✓ The victim vigorously and continuously coughs.

PROCEDURES IN AN EMERGENCY

AIRWAY OBSTRUCTION

PROCEDURE FOR AIRWAY OBSTRUCTION

Partial obstruction

Conscious person
(with a cough)

Do not
hit the victim
on the back



Allow the victim
to continue coughing

Complete obstruction

Conscious person
(without a cough)

Do not
hit the victim
on the back



HEIMLICH
Manoeuvre

PROCEDURES IN AN EMERGENCY

AIRWAY OBSTRUCTION

HEIMLICH MANOEUVRE

- 1.- Stand behind the victim.
- 2.- Place a fist above the victim's navel with the index finger against the abdomen



- 3.- Place the other hand over your fist.
- 4.- Press inwards and upwards with force, moving firmly and sharply.



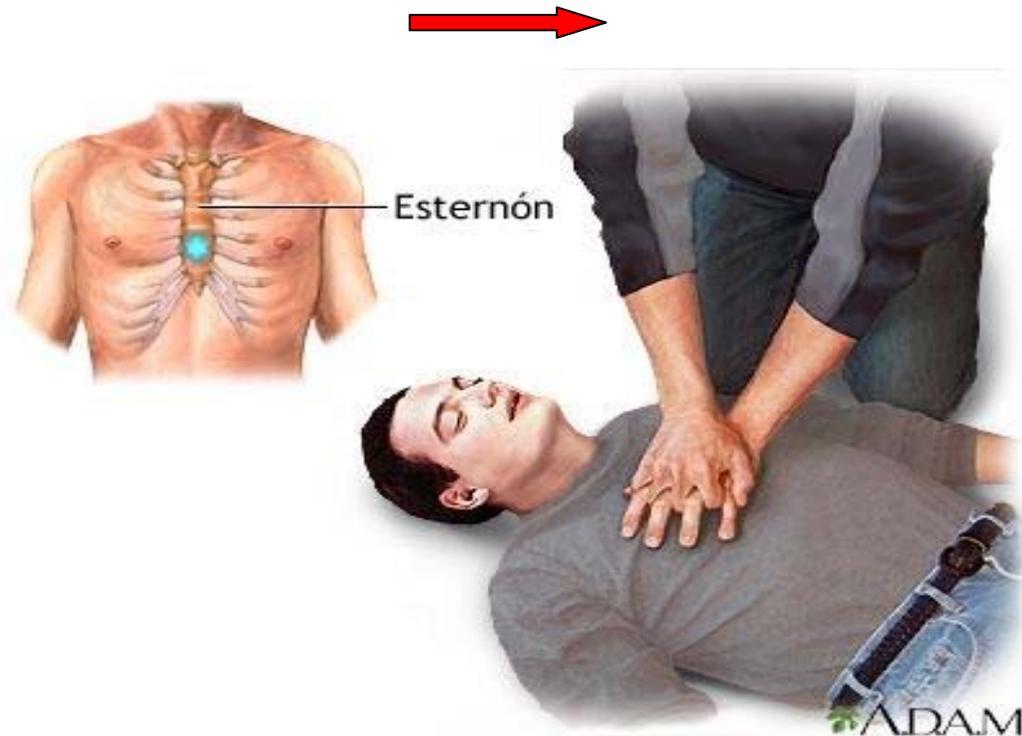
Repeat up to 5-7 consecutive times and check to see if the foreign body has been expelled.

PROCEDURES IN AN EMERGENCY

AIRWAY OBSTRUCTION

If the victim is unconscious

begin chest compressions



***TRAUMA
TO
SOFT TISSUE***

- 1.- WOUNDS
- 2.- BRUISES
- 3.- FIRST-AID KIT

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

1.- WOUNDS

- Skin and mucous membranes have been ruptured.
- Risk of **infection** due to lack of skin protection.

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

FACTORS REGARDING SEVERITY OF THE WOUND

- Location and depth.
- Time of injury.
- How the injury occurred.



MINOR

- ✓ Outside layer only.
- ✓ This does not affect vital organs or bodily functions.

SERIOUS

- ✓ Deep layers.
- ✓ Affects ligaments, nerves, veins/arteries or vital organs.

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

PROCEDURE -MINOR INJURIES

- These are the only wounds that you can help with.
- **Calm the victim** (*and remain calm...*)
- Equipment and hands CLEAN.
- Wear gloves.

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

PROCEDURE -MINOR INJURIES

- Clean the wound: **Stream of water + soap** or antiseptic.
- Use disposable materials (gauze, etc.)
- Clean **from the inside to the outside**.
- Apply an antiseptic (**Betadine®**)
- Cover the wound with dressing + a bandage.
- Victim to be sent for examination.

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

DID YOU KNOW?

HYDROGEN PEROXIDE: is useful to stop bleeding and for cleaning.

COTTON: can leave residue which may encourage infection and hamper scarring.

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

DID YOU KNOW?

OINTMENTS: are medicines and may cause allergic reactions.

POVIDONE-IODINE: is very volatile and may be toxic.

ALCOHOL: is a good disinfectant but may burn the edges of a wound.

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

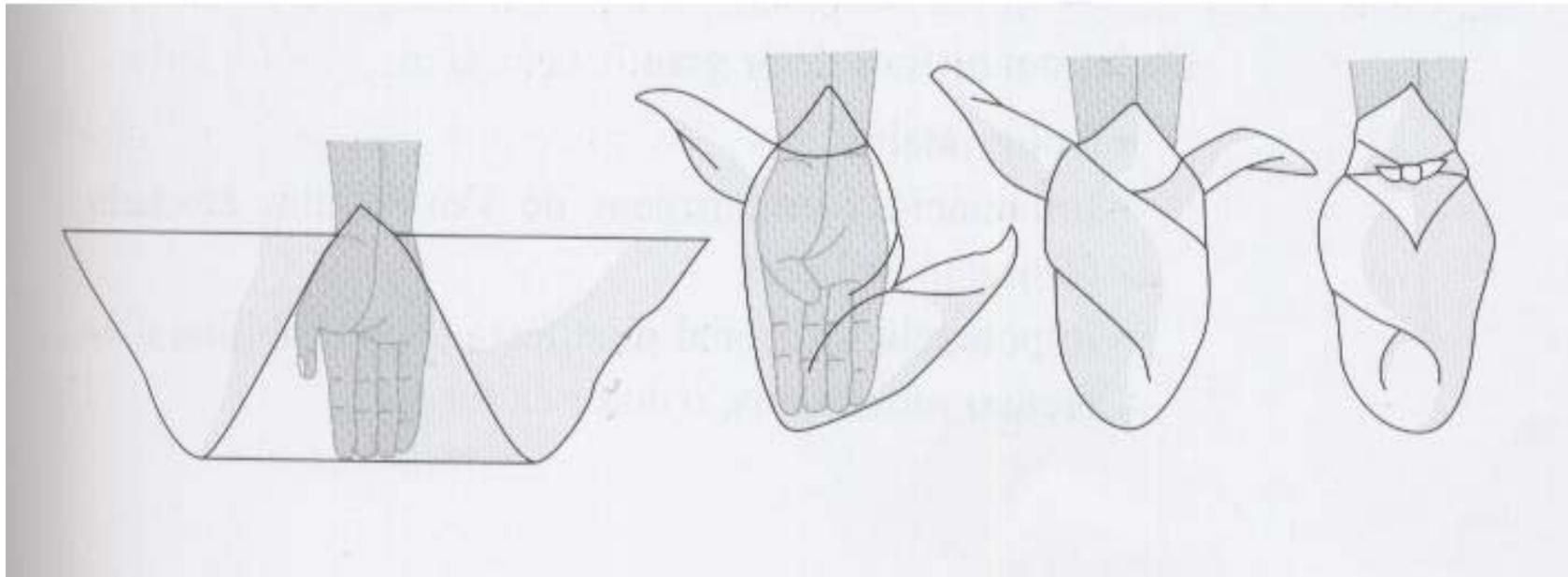
PROCEDURE – SERIOUS WOUNDS

- **REMAIN CALM** (in general...)
- Do not improvise to excess (no heroes, no unnecessary speed required)
- Do not touch the injuries: Do not poke at or remove foreign bodies.
- If bleeding: **COMPRESSION.**
- **PROTECT – NOTIFY- AID**

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

IMPROVISED DRESSING



2.- BRUISES

- A blow that has not caused the skin to break.
- However, the **wound is below** and may have affected other structures (muscles, arteries, veins, bones, organs...)

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

PROCEDURE FOR BRUISES

- Rest, ice not directly on the skin (20 minutes), compression and elevation.
- If you suspect the wound is serious: Activate chain of emergency.



PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

3.- FIRST-AID KIT

- SCISSORS
- TWEEZERS
- STERILE GAUZE
- SURGICAL TAPE
- BANDAGES
- GLOVES
- SALINE SOLUTION
- POVIDONE-IODINE (Betadine®)
- HYDROGEN PEROXIDE
- PAINKILLERS



FIRST AID

PROCEDURES IN AN EMERGENCY

TRAUMA TO SOFT TISSUE

MAINTAINING THE FIRST-AID KIT

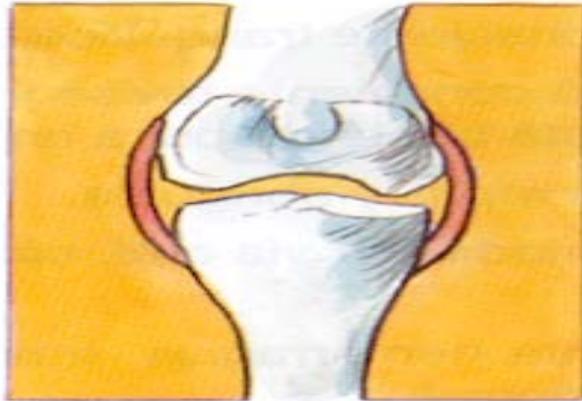
- Keep it in the same place **at all times**.
- Monitor and replace expired products.
- Replace used **products**.
- Keep a **record** of upkeep.

TRAUMA TO EXTREMITIES

- 1.- SPRAINS
- 2.- DISLOCATIONS
- 3.- FRACTURES

PROCEDURES IN AN EMERGENCY

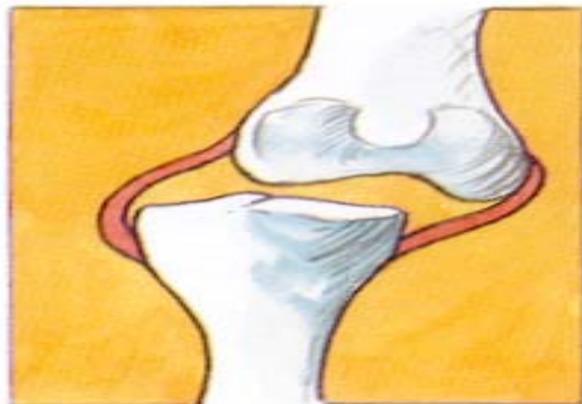
TRAUMA TO EXTREMITIES



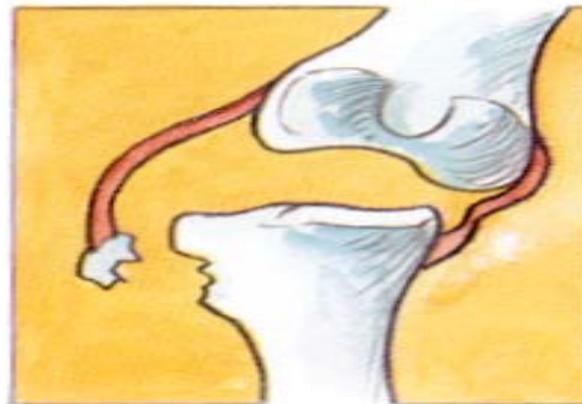
Articulación normal.



**Esguince.
(los ligamentos se estiran).**



Luxación.



Esguince más fractura.

PROCEDURES IN AN EMERGENCY

TRAUMA TO EXTREMITIES

1.- SPRAINS

- **MOMENTARY** separation of joint surfaces.
- Sprains usually occur after forced movement.
- Ligaments and other joint structures are stretched and/or broken.

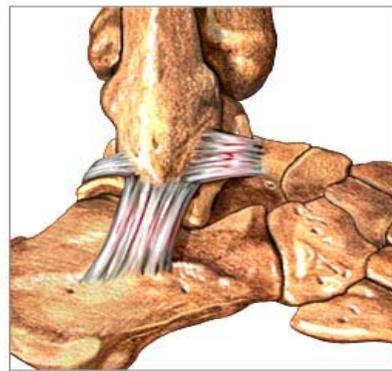
PROCEDURES IN AN EMERGENCY

TRAUMA TO EXTREMITIES

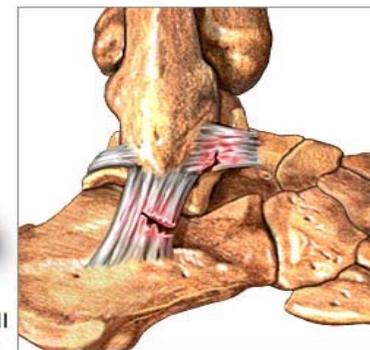
SPRAINS



Esguince tipo I
• Ligamentos estirados



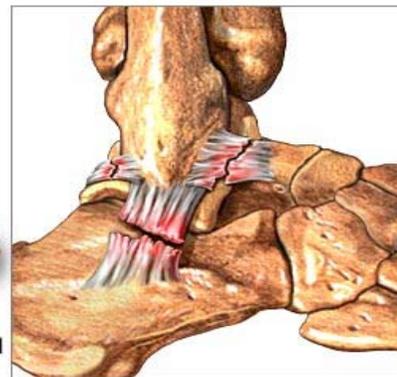
Esguince tipo II
• Ligamentos
ligemente rotos



ADAM.



Esguince tipo III
• Ligamentos
completamente
rotos



ADAM.

PROCEDURES IN AN EMERGENCY

TRAUMA TO EXTREMITIES

SPRAINS

SYMPTOMS

- Initial pain +/- worsening.
- Inflammation.
- Joint movement is not possible.
- At times joints crack...

PROCEDURE

- ✓ Apply cold to area.
- ✓ Lift the affected extremity.
- ✓ REST!
- ✓ Immobilise.
- ✓ Transfer.

2.- DISLOCATIONS

- **MAINTAINED** separation of joint surfaces.
- They occur either directly (a fall or bruise) or indirectly (forced stretching).
- Ligaments and other joint structures are stretched and/or broken.

PROCEDURES IN AN EMERGENCY

TRAUMA TO EXTREMITIES

DISLOCATIONS

SYMPTOMS

- INTENSE pain.
- Joint inflammation.
- Joint movement is COMPLETELY impossible.
- **DEFORMITY.**

PROCEDURE

- ✓ (P.N.A.)
- ✓ Apply cold to area.
- ✓ Lift the affected extremity.
- ✓ REST!
- ✓ Immobilise.

3.- FRACTURES

- The bone is broken.
- It may be:
 - ✓ Open: The skin has been ruptured. (**MORE SERIOUS**).
 - ✓ Closed: The skin has not been ruptured. CAREFUL! Displacements.
- This may affect **adjacent structures**.

PROCEDURES IN AN EMERGENCY

TRAUMA TO EXTREMITIES

FRACTURES

Fractura
simple



Fractura
conminuta



Fractura
abierta



ADAM.

PROCEDURES IN AN EMERGENCY

TRAUMA TO EXTREMITIES

FRACTURE SYMPTOMS

- Intense pain.
- Inflammation.
- Deformity.
- Functional deficit.
- At times joints crack audibly.
- OPEN: wound which may display the bone and bleeding.

PROCEDURES IN AN EMERGENCY

TRAUMA TO EXTREMITIES

PROCEDURE - FRACTURES

CLOSED

- ✓ Do not touch the joint.
- ✓ Immobilise.
- ✓ Cold to area.
- ✓ P.N.A.

OPEN:

- ✓ DO NO TOUCH!
- ✓ P.N.A.
- ✓ Do not attempt to realign.
- ✓ Do not move.
- ✓ Cover and put pressure on bleeding.⁵⁸

BURNS

1. CONCEPT
2. TYPES
3. GENERAL PROCEDURES
4. TREATMENT

CONCEPT of a BURN

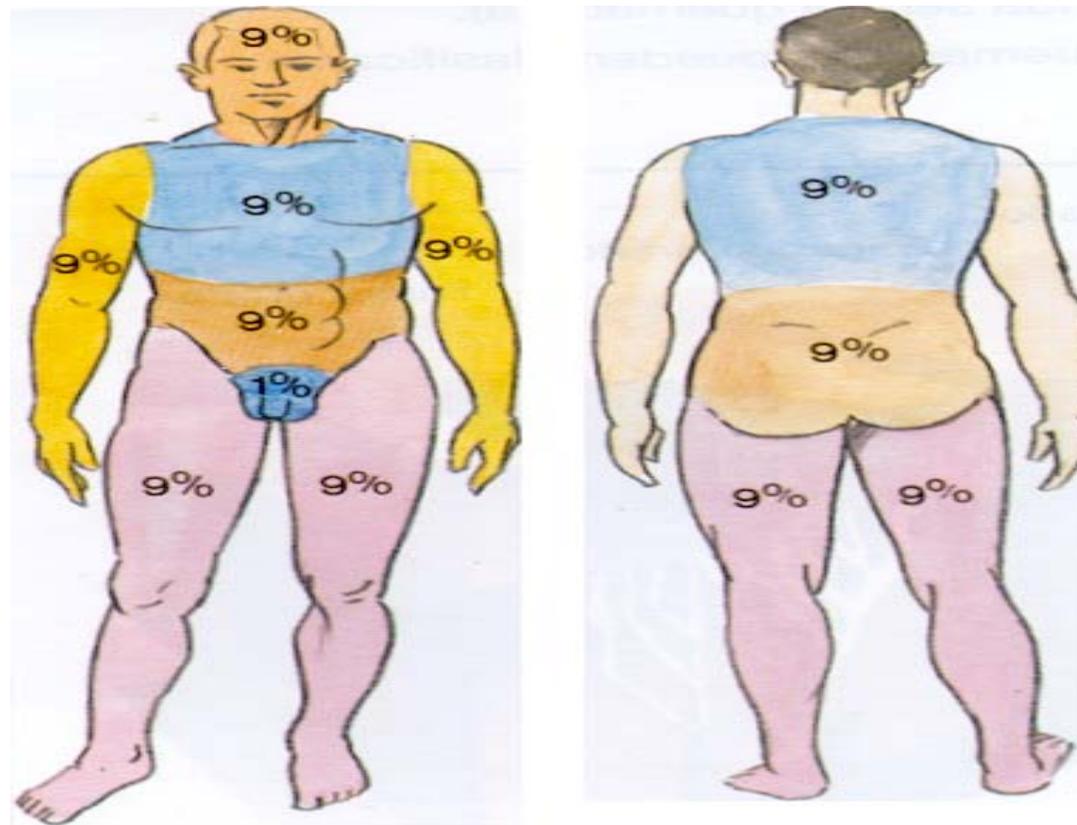
- An injury that occurs after excessive exposure to heat or another **causative agent**.
- Causative agents: Direct flame, elements at high temperatures, abrasive chemicals, electricity, radioactivity, etc.
- This is characterised by:
 - **Fast** deterioration of skin tissue.
 - Significant loss of liquids.
 - High risk of infection.

PROCEDURES IN AN EMERGENCY

BURNS

SEVERITY OF BURNS: This is the percentage (%) of the Total Body Surface Area (TBSA).

RULE OF NINES



FIRST AID

61

PROCEDURES IN AN EMERGENCY

BURNS

TYPES of BURNS

- 1st DEGREE burns:

Only affect the epidermis (superficial); they are painful.



- 2nd DEGREE burns:

Affect the epidermis and the dermis; blisters appear; they are very painful.



- 3rd DEGREE burns:

Affect all skin layers or more...;
They are not at all painful.



PROCEDURES IN AN EMERGENCY

BURNS

GENERAL PROCEDURES

- ✓ Self protection (burnt heroes...)
- ✓ **Avoid secondary accidents.**
- ✓ Rinse the area with **fresh water**, removing unwanted elements.
- ✓ Remove the victim's clothing (except clothing in contact with burn) and restrictive objects (watches, rings, bracelets...)

PROCEDURES IN AN EMERGENCY

BURNS

GENERAL PROCEDURES

MINOR

- ✓ Apply water.
- ✓ Avoid using ointments.
- ✓ For 1st degree burns
Apply moisturizing cream.
- ✓ Do not touch blisters.
- ✓ Cover with sterile dressing.

SERIOUS

- ✓ Activate chain of emergency.
- ✓ Apply water.
- ✓ Protect with wet gauze.
- ✓ **CAREFUL!** Burns are powdery agents (quicklime) or display chemical products. Do not touch directly; remove clothing and clean with lots of water.

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

BLEEDING AND SHOCK

1.- BLEEDING

- CONCEPT
- TYPES
- PROCEDURE

2.- SHOCK

- CONCEPT
- PROCEDURE

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

CONCEPT of BLEEDING

- Blood loss.
- Classified according to location, origin and 'destination'.
 - **Location**: any area on the body.
 - **Origin**: Arteries, veins or capillaries.
 - **Destination**: External or internal.

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

TYPES of BLEEDING

1.- EXTERNAL BLEEDING

- ✓ CALM THE VICTIM
- ✓ Activate CHAIN OF EMERGENCY
- ✓ **COMPRESS!!**
- ✓ Ensure the **victim is sitting up or lying down.**
- ✓ Try to **lift** the affected limb.
- ✓ Apply sterile material whenever possible.
- ✓ **Cover** the victim.

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

EXTERNAL BLEEDING- COMPRESSION



Aplicar presión directa sobre las heridas externas con un trozo de tela esterilizada o con la mano y mantener la presión hasta que el sangrado cese

ADAM.

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

EXTERNAL BLEEDING "SPECIAL CASES"

EPISTAXIS

- ✓ Nosebleed.
- ✓ Blows, irritation caused to mucous membranes, other pathologies (HTN).
- ✓ Compression.
- ✓ Bend forward.
- ✓ Blot if bleeding does not stop.

OTORRHAGE

- ✓ Ear bleed.
- ✓ Trauma to the head.
- ✓ Suspect skull fracture.
- ✓ **DO NOT TRY TO STOP BLEEDING.**
- ✓ Stable recovery position.

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

2.- INTERNAL BLEEDING

- ✓ No blood can be seen from the outside.
- ✓ Difficult to detect...be suspicious!
- ✓ This usually occurs from forceful bruising.
- ✓ Signs and symptoms of **shock...**

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

CONCEPT of SHOCK

A critical state characterized by:

- Gradual loss of vital functions.
- Consciousness is affected.
- Fast and weak pulse, paleness, cold sweat, fast breathing...

Any injury that is not properly treated may lead to a state of shock.

TYPES of SHOCK

- **Hypovolemic shock.**-caused by a decrease in blood volume (loss of liquid)
- **Septic shock.**-caused by an infection.
- **Anaphylactic shock.**-caused by allergies.
- **Neurogenic shock.**-caused by pain.
- **Toxic shock.**-caused by toxins.

PROCEDURES IN AN EMERGENCY

BLEEDING AND SHOCK

SHOCK -PROCEDURES-

- **ACTIVATE CHAIN OF EMERGENCY.**
- CALM THE VICTIM.
- **Cover** the victim.
- Try to **elevate** the victim's legs.
- Treat injuries whenever possible.
- **CPR...**