



# TRAUMA & BURNS

## For FLW



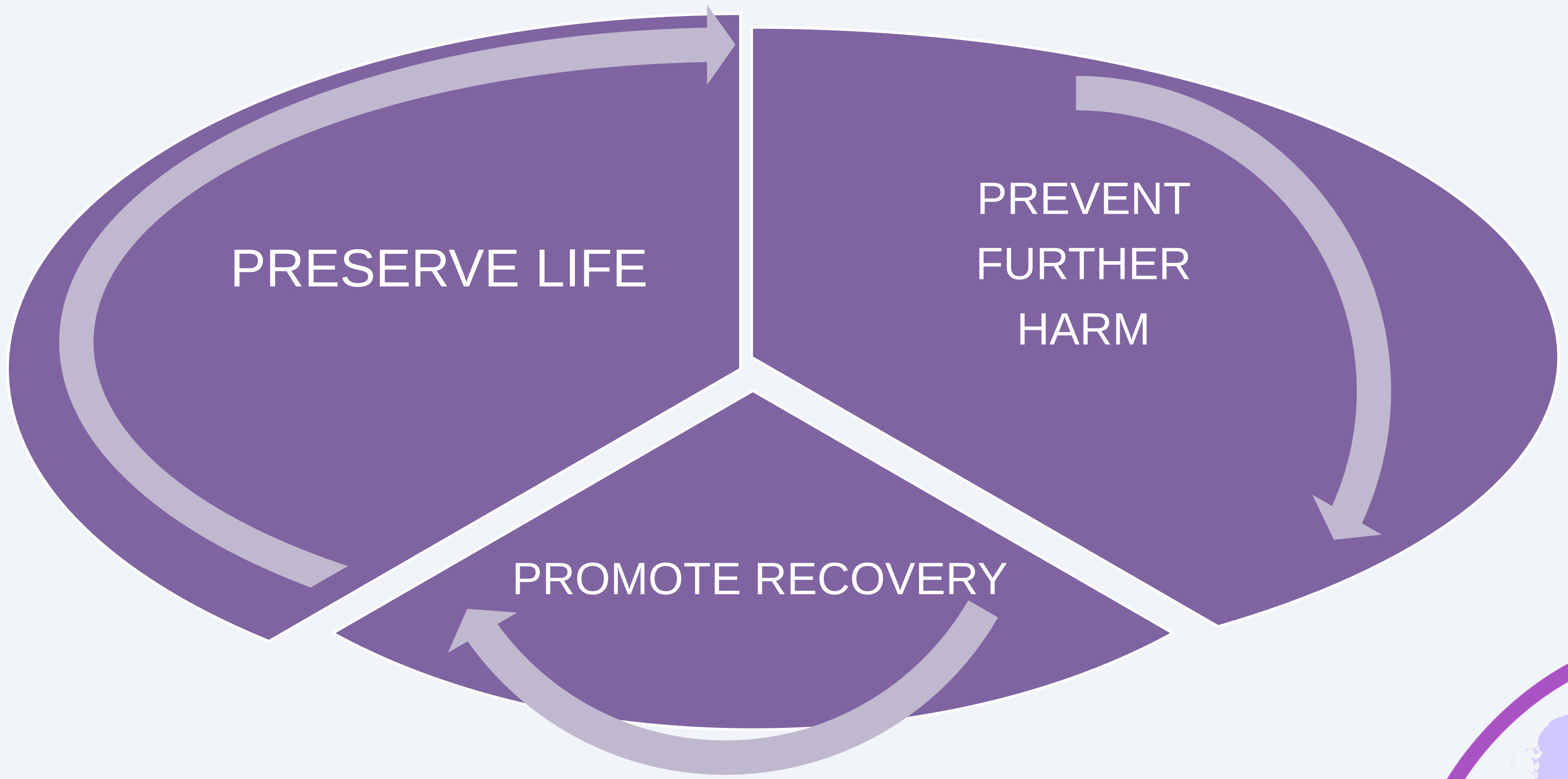


# WHAT IS TRAUMA?

- Trauma is an injury to living tissue caused by an outside (extrinsic) agent.
- Injury is damage or harm caused to the structure or function of the body by an outside force or agent which may be physical, psychological or chemical

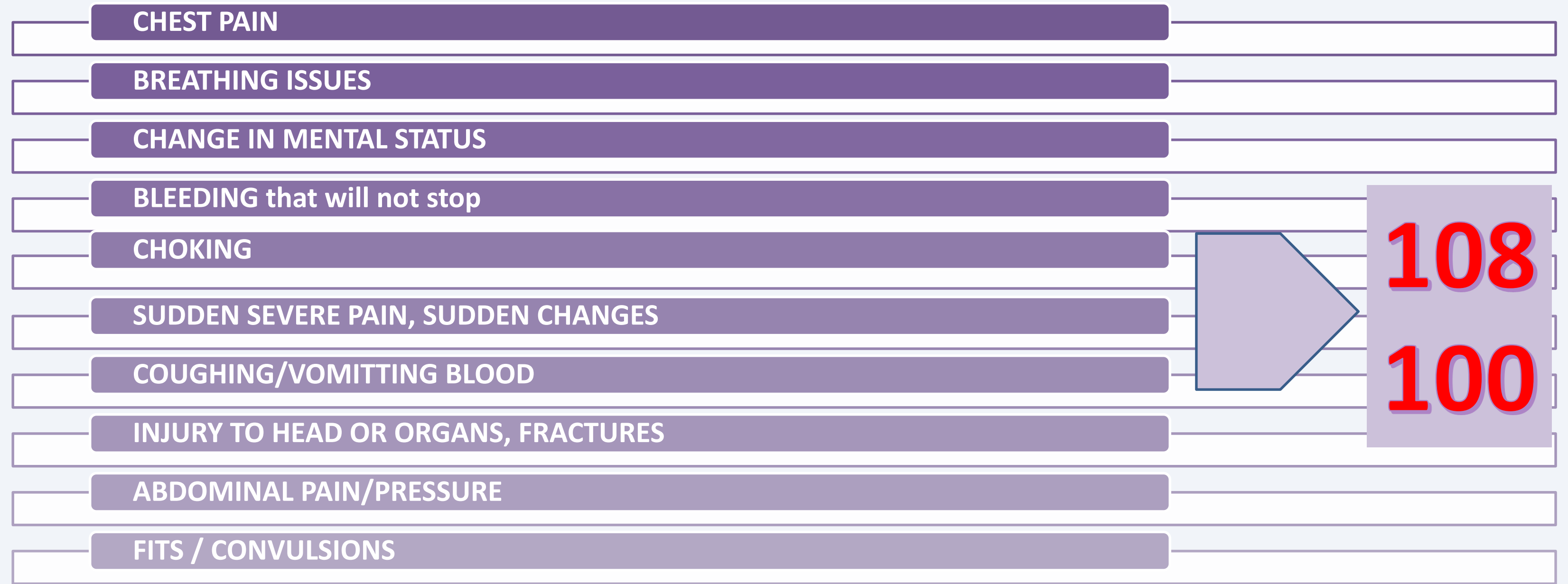


# WHY FIRST AID ?





# EMERGENCY





# SITUATION

- Karun was happy to get a job in the nearby city. He bought a motorbike on installments with his first salary. One day he was late for work. Riding fast, he did not notice a dog crossing the road. He hit the dog and lost his balance. His head hit hard on the road. Karun was unconscious. He is bleeding from one ear profusely. The passers-by saw this, panicked and called you. You run to the scene.
- Describe what you would do.





## About me

Name \_\_\_\_\_

Role \_\_\_\_\_



I am here to help



I am a first aider

## Risk Assessment



Is the area safe?  
Are there any dangers?



Is anyone a threat?

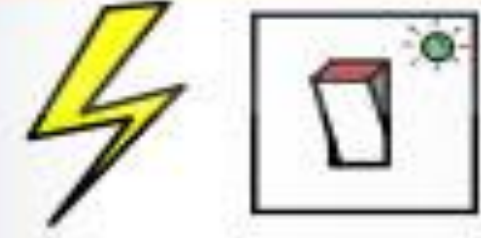


Have you smelt gas or  
anything unusual?

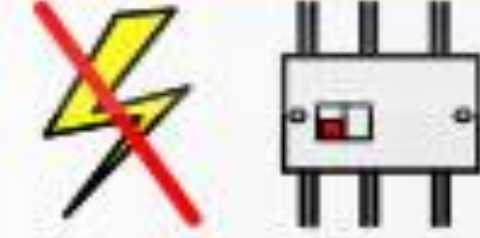


Are other people here  
unwell?

## Risk Assessment



Is the electricity on?



Where do I turn the  
electricity off?



Can you put your  
pet away safely?



Has anyone called 999?

## I am here to help



What is your name?



May I check you  
for injuries?



# DANGER

## Assess for Danger



Fire & Smoke



Vehicles



Electricity



Water



Chemicals



People



Falling objects & machinery







H: Hemorrhage (bleeding) control

A: Airway

B: Breathing

C: Circulation

D: Disability

E: Exposure

**QUICKLY  
ASSESS....TIME  
SAVES LIVES**



1. Call 9-1-1
2. Ensure Your Safety
3. Wear Gloves
4. Find the Bleeding Injury

## COMPRESS AND CONTROL

- Take gauze or quick clot bandages and cover wound
- If wound is large and deep: Stuff gauze and quick clot bandages into the wound.
- Apply continuous pressure with both hands directly on top of bleeding wound.
- Push down as hard as you can.
- Hold pressure to stop bleeding. When bleeding is controlled, wrap wound and gauze tightly with elastic bandage. Continue pressure until relieved by medical responders.
- For severe or life threatening bleeding from arm or leg: Use a tourniquet if available.





# BLEEDING DURING PREGNANCY

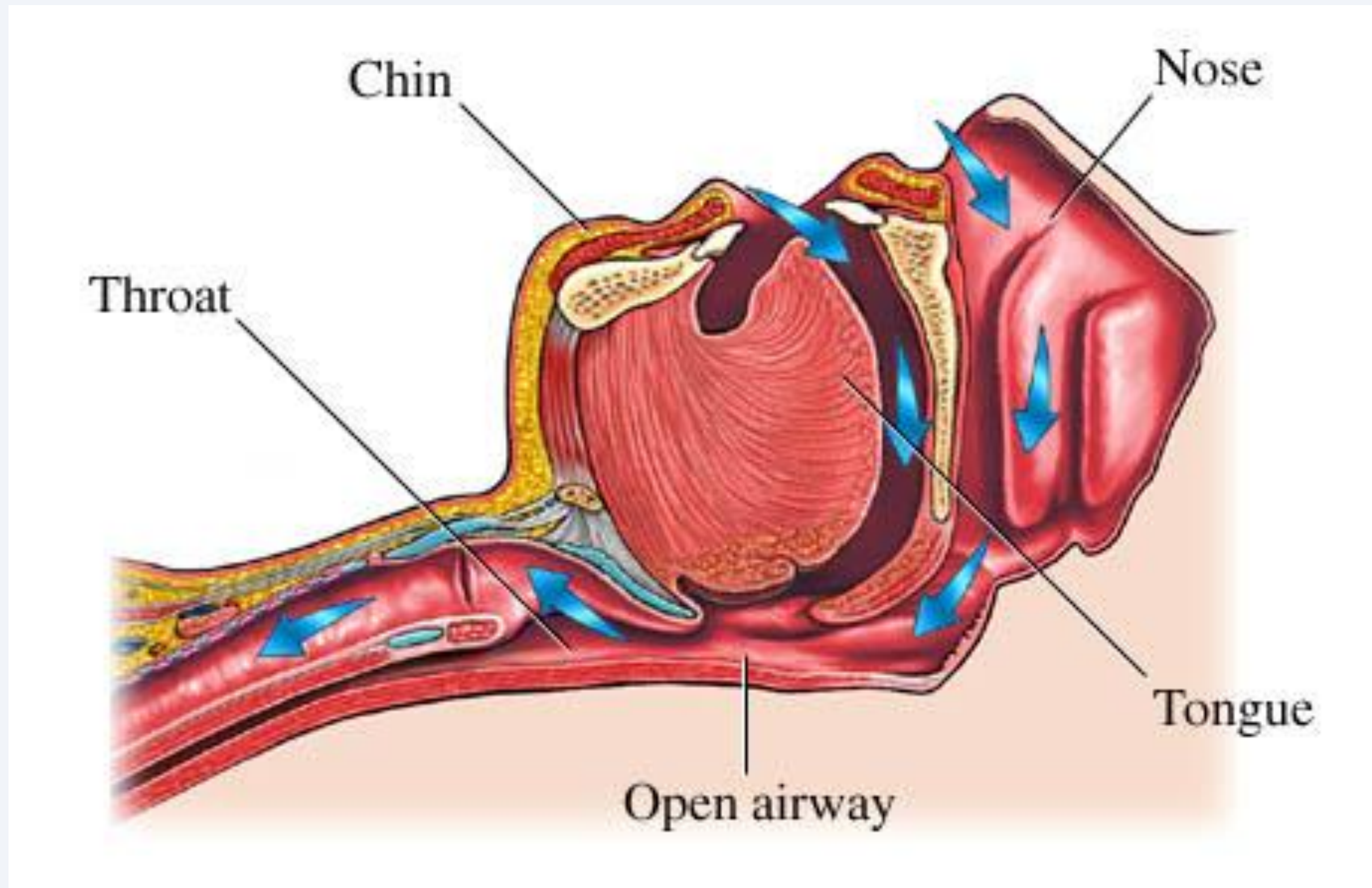
## H

- Heavy bleeding is defined as a clean pad or cloth becoming soaked within less than 5 minutes), but is not yet shocked (they are able to stand or sit up and speak normally



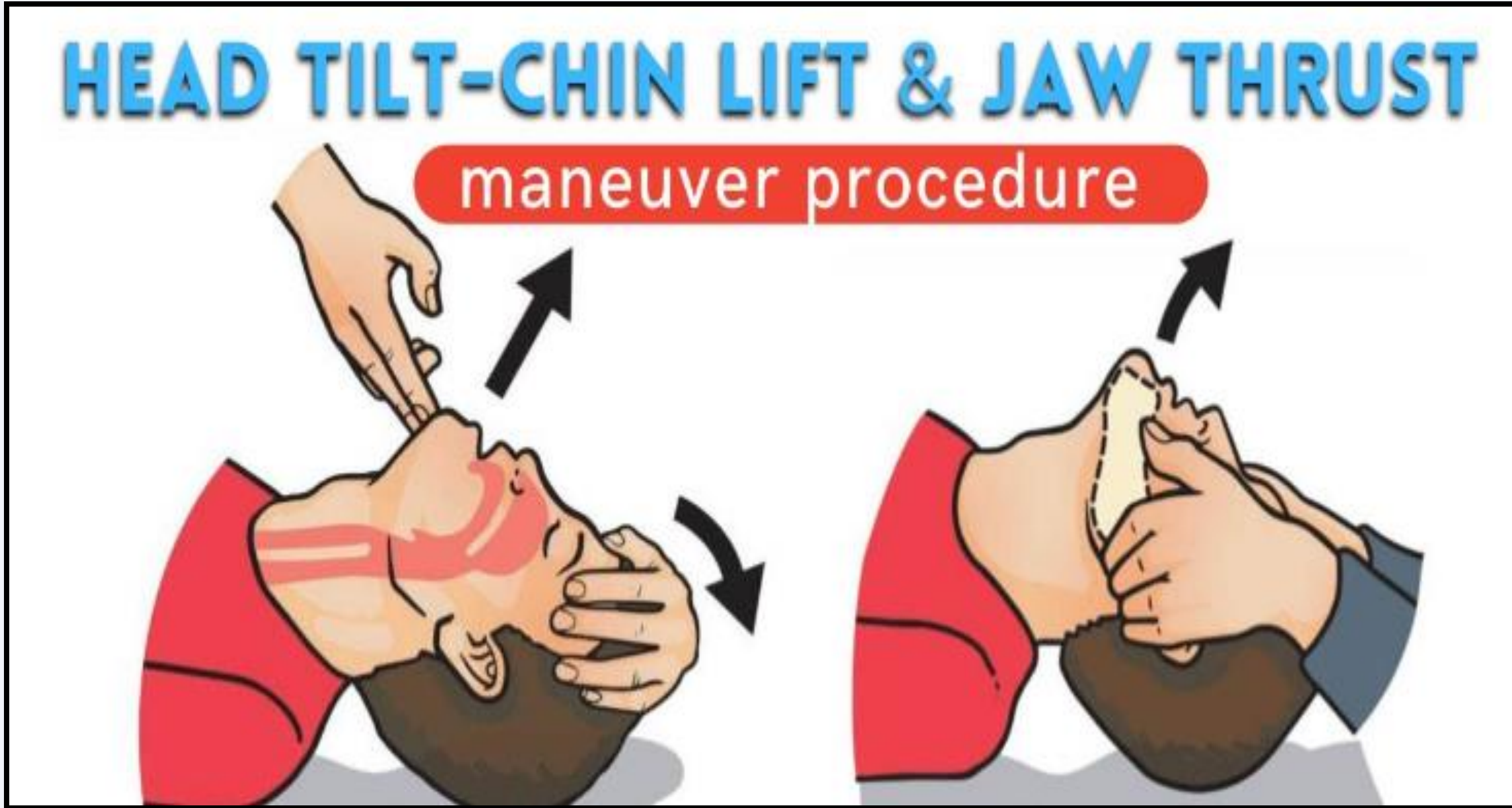


A





# CLEAR AIRWAY



A



# A B

## D - DANGER

To yourself

To others

To casualty

## R - RESPONSE

- Gently "Shake and Shout" at the casualty
- Is the casualty conscious?
- Is the casualty drowsy or confused?
- Is the casualty unconscious, but reacting?
- Is the casualty unconscious with no reaction?
- If unconscious, place the casualty in the stable side position.

## A - AIRWAY

- Is the airway open and clear?
- Is there noisy in breathing?
- Are there Potential obstruction such as blood etc?
- If so, open and clear the airway!

## B - BREATHING

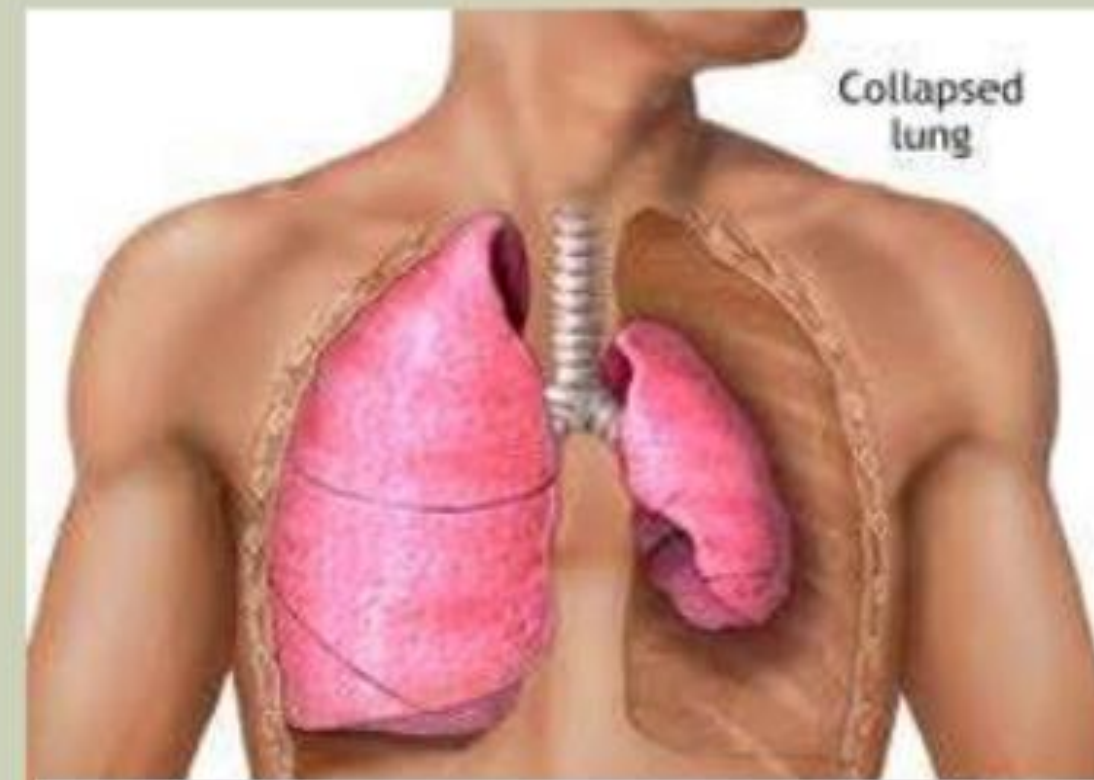
- Look for chest movements
- Listen for sounds for breathing
- Feel for breathes on your cheek
- If not breathing give 2 rescue breathes

# B





## B - BREATHING



- LOOK
- LISTEN
- FEEL





# FILM

<https://youtu.be/ea1RJUOiNfQ>







# C=CIRCULATION

- Check for pulse (in the wrist- radial pulse, or neck- carotid pulse)





# D=DISABILITY

A

ALERT

V

VERBALLY RESPONSIVE

P

PAIN RESPONSE

U

UNCONSCIOUS





# E= EXPOSURE



# A PERSON WITH TRAUMA CAN HAVE A FRACTURE/S

Possible signs and symptoms:

- The break may have been felt or heard
- Pain at or near the area of the injury
- Pain when gentle pressure is applied over the area
- Difficult or impossible normal movement of the limb
- Deformity, abnormal twist or shortening of limb
- Swelling over and around the area
- A coarse grating sound if one end of the bone moves against the other



# FOR FRACTURES AND SPRAINS USE THE RICER APPROACH

- R: Rest the affected body part, ie., immobilization. Use splints/strips of bark/sleeve of cardboard to immobilize the bone. The pictures below show how fractures in different body parts can be immobilized.
- I: Ice can be applied over the suspected fractured area (only if there is no external bleeding).
- C: Compression of the area using a bandage but make sure it is not too tight.
- E: Elevate the affected body part to prevent further swelling.
- R: Refer the person to a Medical Officer immediately.



# CAUTION IN FRACTURE FIRST AID



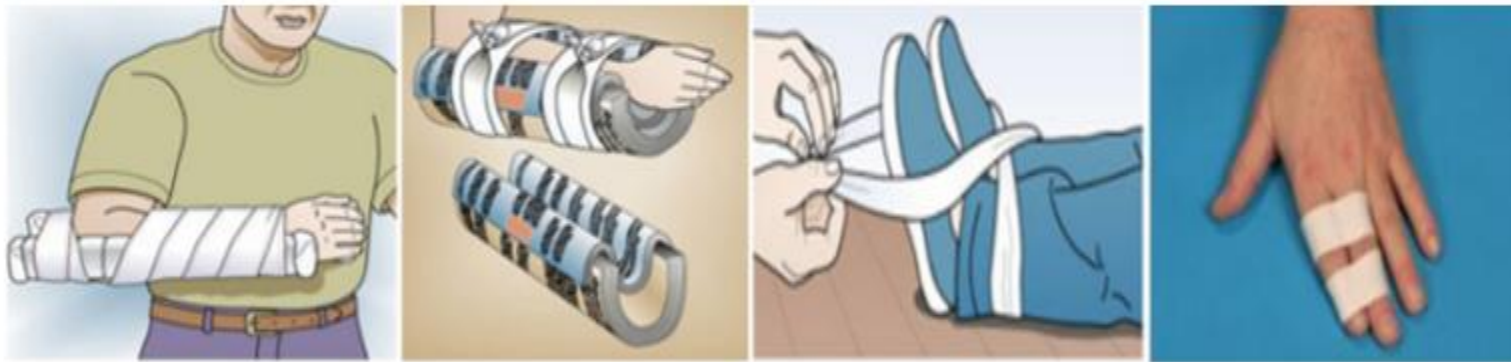
- Never rub or massage broken area
- If neck seems injured, immobilize neck
- If the person has suffered a two-wheeler/motorcycle accident like Karun, and is wearing a helmet,
  - do not attempt to remove the helmet.
  - open the wind shield of the helmet without disturbing the placement.
  - prevent movement of the neck and head to protect against any injury.





Splint must be well padded on the sides touching the body; if they are not properly padded, they will not fit well and will not adequately immobilize the injured part. Before applying splint open wounds must be covered. We have to immobilize in position found.

A basic rule of splinting is that the joint above and below the broken bone should be immobilized to protect the fracture site. For example, if the lower leg is broken, the splint should immobilize both the ankle and the knee.



Improvise materials and techniques for splinting



Splinting of the lower leg



# BLEEDING



- Wash your hands
- Apply pressure on the site of bleeding using a clean cloth. Use AVAILABLE CLEAN material
- Press on the wound for at least 10 minutes to give the blood time to clot.
- Once you are holding pressure on the bleeding site, do not remove the pressure to check if the bleeding has stopped.
- It may be useful to make the person lie down on their back and raising the injured part above the level of the victim's chest which will help in reducing the flow of blood.
- If the bleeding does not stop with pressure then bandage the injured part with a cloth firmly. If bleeding strikes through the dressing, bandage another firmly over the top.





# CONTROL OF EXCESSIVE BLEEDING



- Raise the injured part
- Apply pressure on the wound directly by tying a clean cloth/bandage
- Hold the pressure
- Tie the bleeding site with a bandage firmly but not very tightly.
- Hold this pressure until help arrives



# SAFE TRANSPORTATION AND FOLLOW UP CARE



**CALL  
108**

(0253) 108 From Cellphones





**SAFETY, SCENE, SITUATION**  
MOI – Predicted Injury Patterns, C Spine injury?

**PATIENT ASSESSMENT TRIANGLE**  
**Big Sick!**  
"BACK UP"

Appearance (AVPU)      Effort of Breathing  
  
 Colour (circulation)

**C<sup>E</sup> CATASTROPHIC HAEMORRHAGE**

Pressure, Compression Packing	Torso 	Limbs 	Tourniquet
-------------------------------	--	--	------------

**A<sup>E</sup> AIRWAY**  
Consider C spine (jaw thrust)  
Visually check airway  
STEPWISE Approach

**OXYGEN** → **MEDICAL**      **TRAUMA**

If a deficit is observed during PAT, an SPO2 reading must be obtained before oxygen therapy is commenced

High flow oxygen to be administered on 'A' as trauma is a major cause of hypoxia

**B<sup>E</sup> BREATHING**  
Rate, Depth, Efficacy

<b>FLAPS</b> Feel Look Auscultate Percuss Search Back/armpits	<b>TWELVE</b> Trachea Wounds Emphysema (subcutaneous) Larynx Veins (jugular distension) Evaluate
--	--

**C<sup>E</sup> CIRCULATION**  
Pulse (radial—carotid)  
Capillary Refill Tike (central)  
Temperature

Blood on the Floor + 4 more Chest Abdomen Pelvis Long bones	SAM pelvic Splint	<b>TCP</b> Tourniquet—check Compression—check dressing Pelvis—apply SAM pelvic splint (consider MOI, abdominal or lower limb injuries)
---	-------------------	---

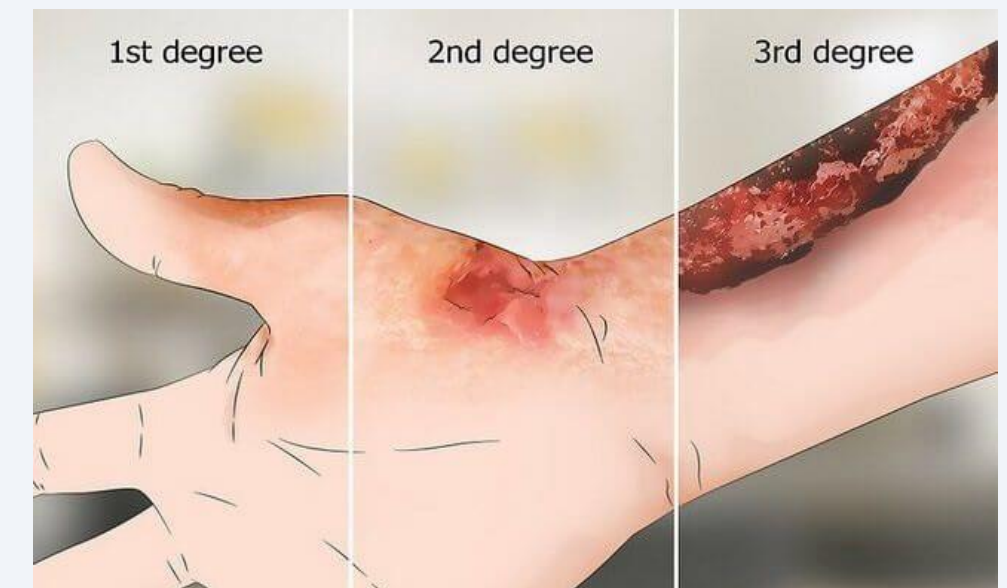
**D<sup>E</sup> DISABILITY**  
AVPU  
PERRL  
Haemoglucose Test (HGT)

**HEAD INJURY**  
Check for;  
Base of skull/cranial/scalp/facial injury

**E**  
**Expose—Environment—Evaluate—Evacuate**  
**Reassess!**

# BURNS

- Burns including lightning injuries and electrocution
- Burns occurring from flames, hot liquids and steam, electric shocks
- Burns from certain chemicals like acids or alkali burns caused by lime, or some alkali based toilet cleaners etc
- Almost all are preventable.
- Alkali burns are more serious than acid burns as the damage is ongoing.





# MANAGEMENT PROTOCOL – SPECIFIC MEASURES



## Use the STOP Approach

S: Strip burnt clothes / jewelry.

T: Turn on COOL tap and let the burn wash under cool water for at least 10 minutes.

O: Organize safe referral.

P: Protect burn with a clean cloth.





# CAUTION

- Do not apply ice directly over the burn.
- Do not apply any lotions/creams over the burn.
- Do not attempt to remove cloth stuck to the skin that is burnt.
- Do not peel away burnt skin or blisters.
- Never run if clothing is on fire

# SAFE TRANSPORTATION



## FIND OUT, MAP, KEEP PHONE NUMBERS

- Which can provide primary care for emergencies like superficial burns etc.
- Which provide secondary care (where a Medical Officer is present) for burn emergencies
- Where specialist doctors are available who can manage emergencies like severe burns etc.
- Keep phone numbers for all available ambulance services handy.
- Keep contact numbers of the CHO and MO handy.
- Information about facility where the patient has been referred and follow up once he/she is discharged





# CAREFUL TRANSPORTATION

- While transporting the victim of lightning injuries, follow the protocol while maintaining immobilization by supporting the head and neck of the victim.
- A pregnant victim of lightning needs to be referred to a facility where an Obstetric surgeon is available irrespective of the severity of the injury.







# FOLLOW - UP CARE



- Provide care even after discharge from the health facility, for complete recovery.
- ASHA to identifying persons who have received treatment for burns but require follow-up care either for a short duration until complete recovery or for a longer period –Palliative Care
- MPW will provide supportive supervision to ASHA
- Following care to be provided to victim of burns:
  - Educate the person on wound care
  - Check for any complication in healing
  - If prescribed physiotherapy –facilitate to visit HWC
  - In case person develops permanent disability
  - Provide psycho-social support to help the person overcome the crisis.

# PREVENTION AND AWARENESS GENERATION AT THE COMMUNITY LEVEL – BURNS



- Never leave children unattended in the kitchen.
- Always switch off stove/oven when not in use.
- Do not handle/be careful while handling very hot liquids.
- Keep away safely any chemical like cleaning acid, lime or alkaline based toilet cleaners etc.
- Burns can also be caused by steam, eg. Steam from pressure cookers, etc.





# PREVENTION AND AWARENESS GENERATION AT THE COMMUNITY LEVEL - ELECTROCUTION



- Stay alert while using any electrical appliance inside or outside the house
- Use of rubber slippers while dealing with live electric wires, sockets etc.
- Do not leave any electrical appliance near water
- Keep small children away from electric appliances, plug points, etc.
- Do not go near electric grids or live wires.





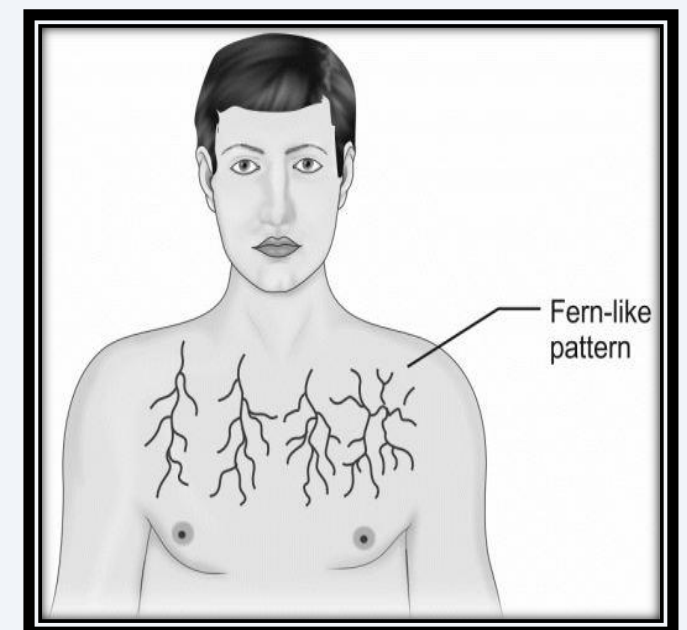
# PREVENTION AND AWARENESS GENERATION AT THE COMMUNITY LEVEL – LIGHTENING INJURIES

- Lightning is the electric discharge that happens during thunderstorms.
- Can be very dangerous when lightning comes in contact with the body.
- In most situations, lightning often travels over the skin rather than through the body and hence, most victims of lightning injuries survive.
- Most common immediate effect is on the respiratory system of the body which can cause cardiac arrest leading to death.



# RECOGNISE LIFE THREATENING SITUATIONS PERTAINING TO LIGHTENING INJURIES

- Treat every case of lightning injury as immediate
- Refer to the nearest appropriate facility as soon as possible.
- Look for signs (to understand the severity and provide stabilization)-
  1. Loss of consciousness
  2. Loss of memory
  3. Confusion
- A feathering or fern shaped burn on the skin (not very common, but whenever present, is a classical sign of lightning injury).



# PREVENTING LIGHTENING INJURIES – KEY MESSAGES FOR AWARENESS GENERATION



- Prevention of indoor lightning casualties: Though houses provide safe shelter, still there is a risk. It is a myth that lightning injuries cannot be caused indoors.
- Avoid water: Do NOT bathe, shower, wash dishes, or have any other contact with water because lightning can travel through a housing plumbing vent.
- Avoid electronic equipment: Do NOT use computers, laptops, game systems, washers, dryers, stoves, etc or anything connected to an electrical outlet. Lightning can travel through electrical systems, radio and television reception systems, and any metal wires or bars in concrete walls or flooring.
- Avoid windows, doors, porches, and concrete: Do NOT lie on concrete floors during a thunderstorm. Also, avoid leaning on concrete walls.



# PREVENTING LIGHTENING INJURIES – KEY MESSAGES FOR AWARENESS GENERATION



- Prevention of outdoor lightning casualties:
  - Be aware - about thunderstorms predictions.
  - Go indoors - Remember phrase, “When thunder roars, go indoors.”.
  - Seek shelter immediately even if caught out in the open
- If one is caught outside with no safe shelter nearby-
  - Immediately get off elevated areas such as hills, mountain ridges,
  - Never lie flat on the ground. Crouch down in a ball-like position with your head tucked and hands over the ears, with minimal contact with the ground.





# PREVENTING LIGHTENING INJURIES – KEY MESSAGES FOR AWARENESS GENERATION



- Never shelter under an isolated tree.
- Never use a cliff or rocky overhang for shelter.
- Immediately get out of and away from ponds, lakes, etc.
- Stay away from objects that conduct electricity (barbed wire fences, power lines, windmills, etc)
- Separate- If one is in a group during a thunderstorm, separate from each other. This will reduce the number of injuries





# THINGS NOT TO BE DONE

- **Do not stay in open vehicles, structures, and spaces**

During a thunderstorm, avoid open vehicles such as motorcycles.

Be sure to avoid open structures such as playgrounds.

- **Do not stay near tall structures**

Do NOT lie on concrete floors during a thunderstorm. Also, avoid leaning on concrete walls. Lightning can travel through any metal wires or bars in concrete walls or flooring.



# QUESTIONS

1. What is the full form of the STOP approach for managing first aid for burns?
2. Give three points for safe transportation of a person with burns.



# Thank You

