



Maritime Health Trainings for Seafarers and Doctors

«Head and Spine Injuries»

ERASMUS+ KA2 - Cooperation for Innovation and the Exchange of Good Practices
KA202 - Strategic Partnerships for vocational education and training



REPUBLIC OF TURKEY
MINISTRY OF HEALTH
GENERAL DIRECTORATE OF HEALTH
FOR BORDER AND COASTAL AREAS OF TURKEY



AP&A
GROUP

Head and Spine Injuries

✓ **Learning Objective;**

This section is aimed to raise awareness of officers on head and spine injuries to happen onboard. Upon completion of this section, trainers will be able to:

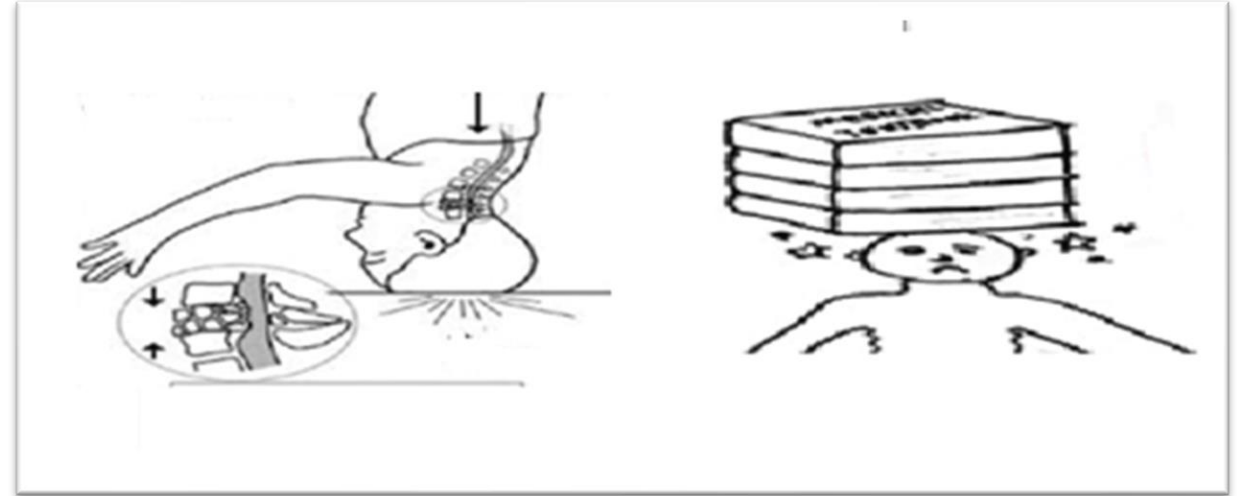
- Explain what is head and spine injury?
- Explain types of injuries:
 - Scalp Injuries,
 - Skull and Brain Injuries,
 - Facial Injuries,
 - Spine (backbone) Injuries
- Familiarize on first aid intervention to ;Head and Spine Injuries

Head and Spine Injuries

- Traumatic brain injury is defined as impairment in brain function as a result of a mechanical force.
- The brain is a soft and sensitive organ. Even if there are no obvious signs of trauma to the head or face, there can be damage of brain or spinal cord.
- Spinal injuries can cause sudden compression or separation in the spine. As a result, the nervous system is affected, and some negative results may occur.

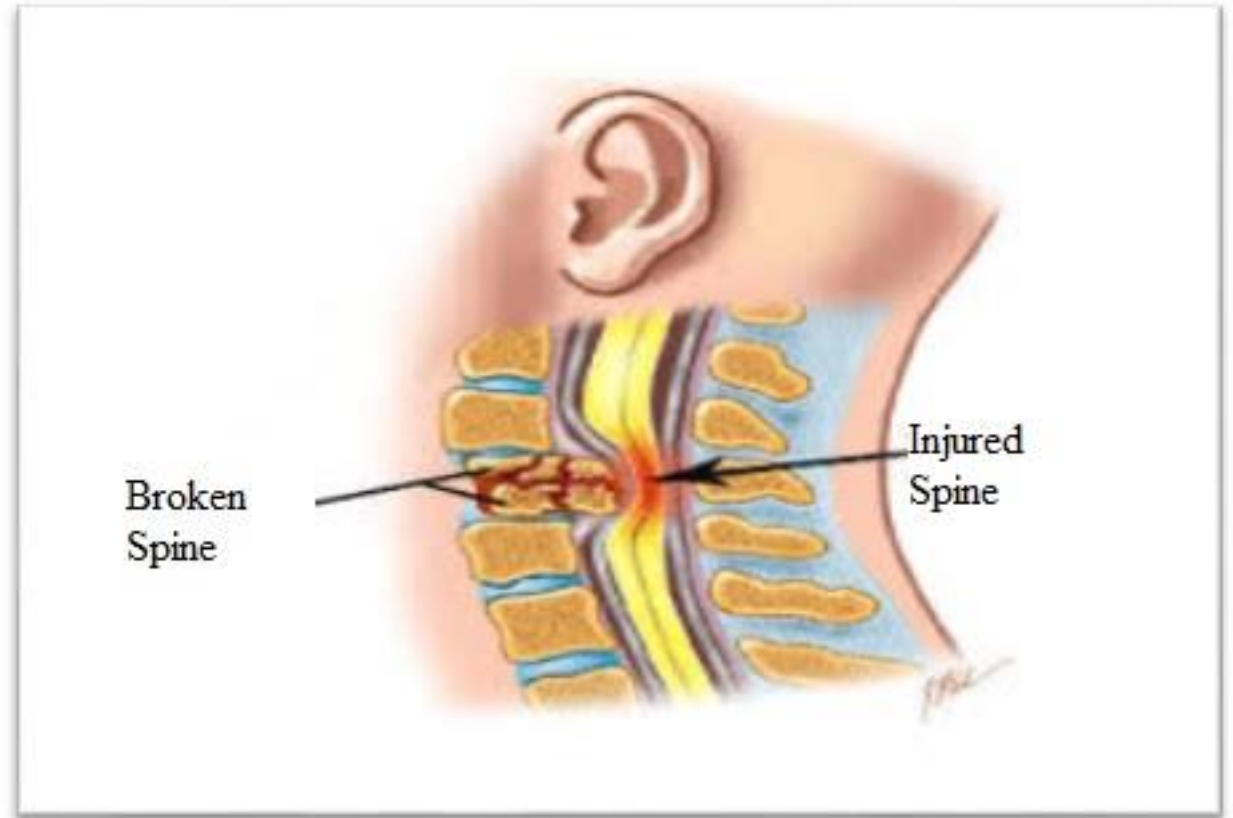
Head and Spine Injuries

- Fall from high,
- Head and trunk injuries,
- Physical attacks to head,
- Sports and work accidents,
- Stay under the debris.



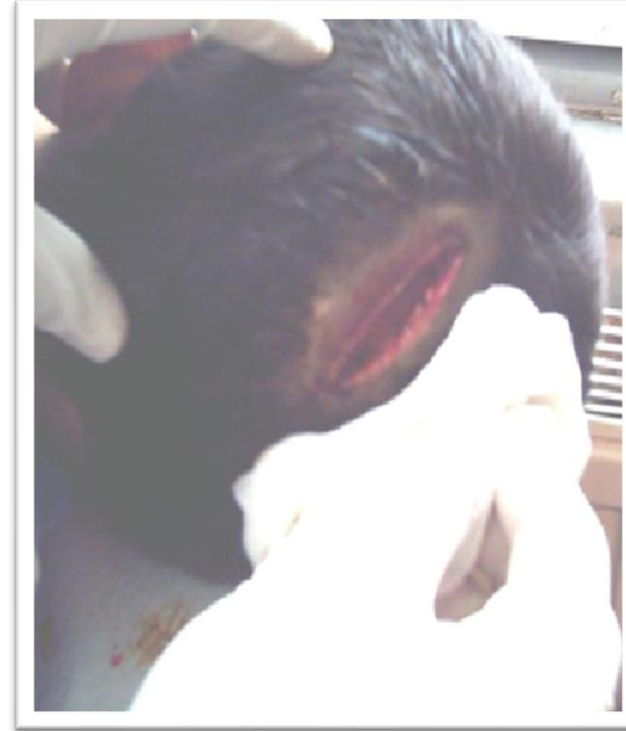
Types of Injuries

- Scalp Injuries,
- Skull and Brain Injuries,
- Facial Injuries,
- Spine (backbone) Injuries.



Scalp Injuries

- The scalp can be easily displaced on the skull surface and can be easily separated by any impact.
- In this case, a large amount of bleeding occurs, so it is necessary to stop the bleeding first.



Head and Brain Injuries

Skull Fractures:

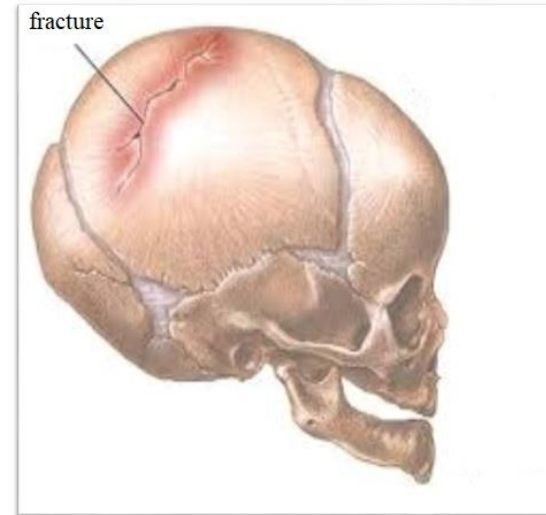
In skull fractures, brain injury is more important than bone fracture. Therefore, signs of brain damage should be evaluated.

There Are Two Types of Skull Fractures:

1- Linear Fractures are breaks resembling a thin line.

It occurs where the assault happens, usually not very serious.

It creates a soft and large swelling under the skin.



2- Crash Fractures occur when broken bones displace inward.

It usually causes injury to the underlying brain tissue.

The displaced piece can tear the meninges and damage the brain tissue.

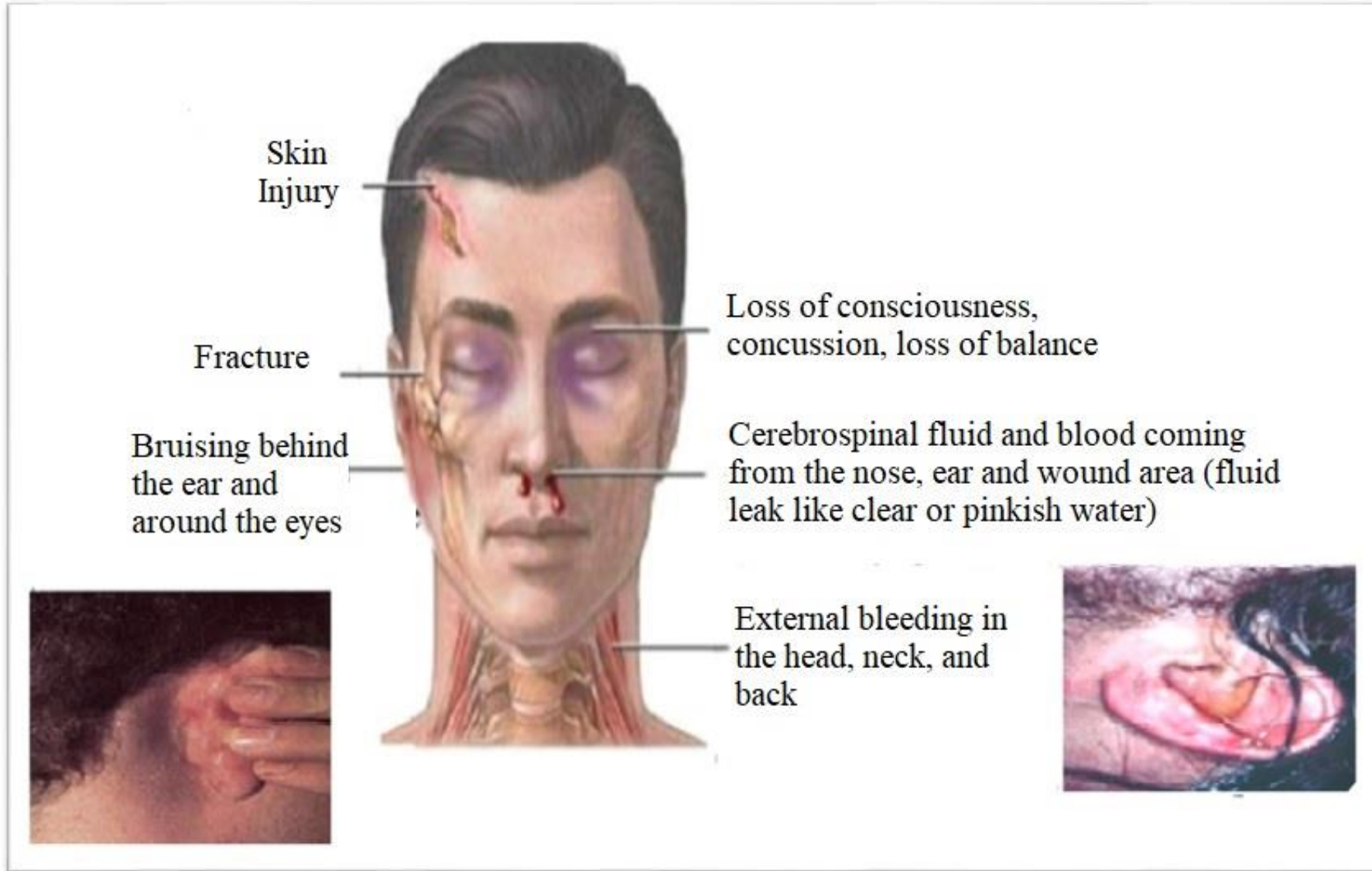


Facial Injuries

- In mouth and nose injuries, breathing can be seriously affected and the sense organs can be damaged.
- As a result of a facial injury, facial bones, head bones, and orbital, lingual, and nasal septums may break or crash.



Symptoms of Facial Injuries



Skin Injury



Fracture

Bruising behind the ear and around the eyes

Loss of consciousness, concussion, loss of balance

Cerebrospinal fluid and blood coming from the nose, ear and wound area (fluid leak like clear or pinkish water)

External bleeding in the head, neck, and back



Spine Injuries

One of the following symptoms may occur at the end of spine injury.

- Sensation loss in the arms and legs,
- Pain in the area
- Limited movements,
- Tingle and abirritation,
- Urinary/Bowel movement incontinence or inability
- Neck and waist area are the most affected area in accident
- The damage is very paintfull.



First Aid for Head and Spine Injuries

- Check consciousness (getting answers to verbal or painful stimulation)
- Evaluate the vital signs (Airway, Breathing, Circulation, Body temperature, Blood pressure),
- If the patient/injured person is unconscious, ensure that they do not move
- **Call TeleHealth/Medicin Center and ask for medical aid**



In Head and Spine Injuries, if there are;

- Changes in consciousness level,
- Memory changes or memory loss,
- Pain in head, neck and back,
- Tingling or loss of sensation in the hands and fingers,
- Complete or partial loss of motion anywhere in the body,
- Deformity of head or backbone.

However, even if the patient has no symptoms;

- ✓ Facial and collarbone injuries,
- ✓ All of the fall cases,
- ✓ Damage at the head area,
- ✓ All unconscious patients/injured people



HEAD AND SPINE INJURY SHOULD BE CONSIDERED!!!

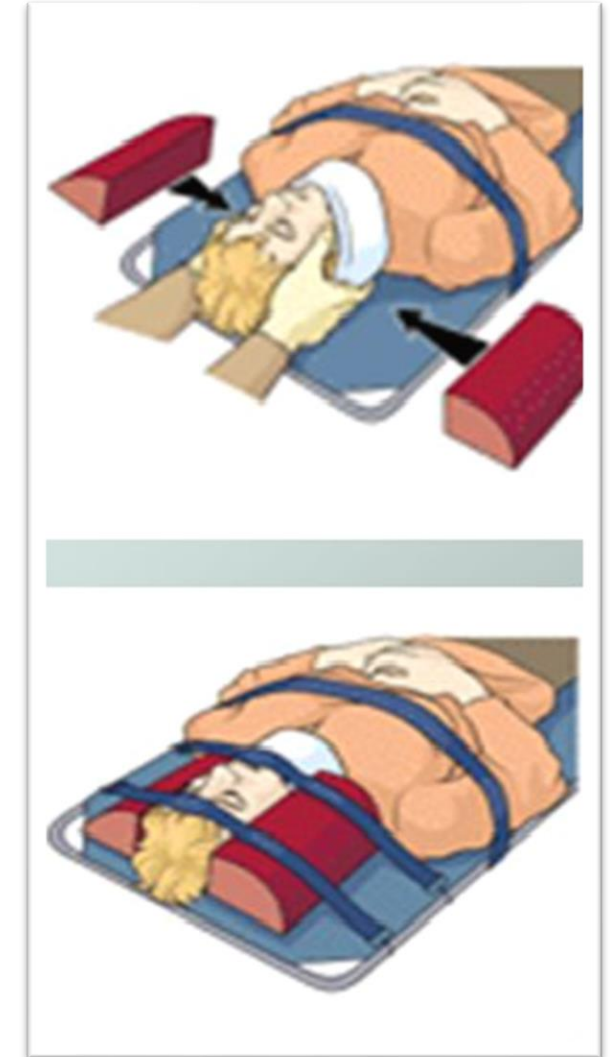
First Aid for Head and Spine Injuries

- Make sure that the head-neck-body axis is not disrupted and the patient is not exposed to trauma during the transfer and handling of the patient/injured from the scene,
- You should keep the information about all practices and the patient/injured and report to the health professionals,
- You should never leave the patient/injured alone.
- **Call Tele Health Center immediately**



Spine Injury Immobilization

- ✓ Early transfer from the vessel is very important for the patient, who is suspected of having spinal injury.
- ✓ You should limit the neck movements of the patient who is considered to have a neck injury, keep the neck area stable and completely prevent the movement of the patient. Use the neck collar.
- ✓ During the patient's transfer, you should carefully move the head, neck and body simultaneously and make sure that the neck does not move,
- ✓ At least three people should assist in the transfer.****



Neck Injury Immobilization

- The splint or fixing material worn must prevent the neck to move forward, backward and do internal and external rotation.
- Lay the patient or injured person flat,
- Loosen or take off the tight clothes,
- If there is a neck collar, wear it, if not;
- Fold a newspaper or magazine with an average height of 10 cm, wrap the folded newspaper or magazine with a triangular cloth,
- Place the center of the neck collar forward, under the chin of the patient or injured.
- Attach the tip of the fixing material to the front.



Wearing Neck Collar

Types of Neck Braces Available on Vessels



A patient wearing neck collar



- Spinal fractures are those with the highest probability of stroke.
- You should definitely call the Tele Health Center.
- Provide Basic Life Support
- Lay the patient on a hard board/stretchers on their back.
- Fill in the nape, spinal cavity and back of the knee.
- At least three first aiders are needed to place the patient on a stretcher. The first person holds the head and neck, the second person holds the back and hip and the third person holds the leg and ankle.
- If the cervical vertebra is broken, a person will only hold the head.
- The feet of the patient are never elevated or moved.
- The patient should be immobilized and transferred with a stretcher.

How is Triangular Bandage Put in Head Injuries?



You should;

- prepare the materials,
- fold the bottom of the triangular bandage about 5cm,
- place the bottom of the triangular cloth on the forehead,
- cross the two ends of the base crosswise at the nape,
- bring the ends forward and tie them over the forehead,
- stretch or fold the triangular bandage's end at the neck by pulling it.

- Most of the patients with traumatic brain injury experience this syndrome.
- Generally, it is experienced at the 1st and 2nd weeks most frequently in the recovery period after head trauma, and decreases and disappears within 1 month.

Signs and Symptoms

- Headache
- Drowsiness
- Personality change
- Amnesia (loss of memory) and loss of concentration
- Insomnia (sleep disorder)

What Should We Do?

- Call the TeleHealth/Medicine Center.
- Keep the patient away from stress.
- Treat the headache. If symptoms continue, transfer the patient early.

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