UNIT 1 MANAGING INJURY (HEAD AND SPINAL)

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1.0 INTRODUCTION

First aid of victims with head, spinal and other associated injuries requires specific skills and careful actions on the part of first aid provider to save life. It is important to learn the techniques of first aid in head and spinal injuries to save the life of the victims and avoid further injuries. Also the first aid provider must be skilled enough to perform immediate first aid as per condition he encounters. You have already learnt in the Theory Block 3, Unit 2 regarding various types of Head, Spinal and other associated injuries. Also in the previous Block of this Practical Course you have learnt about bandages, wound care and control of bleeding. The knowledge and skills which you have acquired through these practicals would also be of use here when learning about first aid in case of head, spinal and associated injuries since these emergencies are associated with presence of wound, bleeding and require you as a first aid provider to use these skills which you have already acquired when dealing with emergencies of head, spinal and associated injuries and taking a step further than what you have previously learnt. In this practical unit, we will be discussing about the skills and techniques that you need to consider when providing first aid in head, spinal and other associated injuries.

1.1 OBJECTIVES

After the completion of this unit, you will be able to:
- recognize Head, Spinal and other associated injuries;
- assess a victim with Head, Spinal and other associated injuries;
- demonstrate first aid in case of Head, Spinal and other associated injuries; and
- perform First Aid in these conditions as and when required.
1.2 RECOGNIZING HEAD, SPINAL AND ASSOCIATED INJURY

As already learnt in Theory Unit, you know how head, spinal and other associated injuries can be recognized by their features and characteristics. In this section, we will discuss the procedure for identifying various types of head, spinal and associated injuries.

Purposes

The purpose of this procedure is to recognize the head, spinal and various types of associated injuries.

Articles required

You will require various flashcards for recognizing various types of these injuries. You can also discuss various case scenarios for various types of injuries.

Procedure

Step 1  To recognize open head injury, you will notice that skin of head/scalp or its deeper layers are injured, cut or torn. There is pain, bruising and bleeding. Sometimes penetrating injuries to head may be associated with object embedded in the head (Fig. 1.1).

Fig. 1.1: Open Head Injury

Step 2  To recognize closed head injury (compression or concussion), you will find that the person complains of dizziness, seeing stars in front of eyes, decrease in his/her levels of consciousness or person may become unconscious for some time and then gain consciousness back. The person may even have headache and nausea (Fig. 1.2). There may be weakness fast pulse, fast breathing and confusion. The person may not remember anything.

Fig. 1.2: Closed Head Injury
Step 3 To recognize skull fracture, you will notice a bump or depression on the head, deformity of the skull, swelling, bleeding from ears and nose and loss of clear fluid from the nose or ear which is most probably CSF (Fig. 1.3). There may be presence of external cut or bruise on the head.

Fig. 1.3: Skull Fracture

Step 4 To recognize spinal injury, you will notice that the person is not able to move or perform any functions, there is paralysis, muscle spasm or pain along the spine (Fig. 1.4).

Fig. 1.4: Spinal Injury

Step 5 To recognize eye injury, you will notice bleeding from eyes, wound in or around the eye, bruising or swelling around the eye, pain, changes in the victim’s vision. Some object may be embedded in the eyes depending on the cause. (Fig. 1.5).

Fig. 1.5: Eye Injury

Step 6 To recognize the ear injury, you will notice bleeding from the ear, bruising or swelling around the ear. Sometimes any object may be embedded in the ear (Fig. 1.6).

Fig. 1.6: Ear Injury
Step 7  To recognize nose injury, you will notice bleeding from the nose, bruising, wound, swelling and tenderness around the nose. If there is nose fracture, then the bone of nose will be displaced to one side. Some object may be embedded depending on the cause (Fig. 1.7).

![Fig. 1.7: Nose Injury with fracture](image)

Step 8  To recognize jaw injury, you will find extreme pain, tenderness, swelling, inability to move jaw, inability to open mouth/speak or swallow, teeth look irregular. If fracture is present then the jaw structure will look deformed. Some object may be embedded depending on the cause (Fig. 1.8).

![Fig. 1.8: Jaw Injury](image)

Step 9  To recognize mouth injury, you will notice bleeding from the mouth, wound/swelling/tenderness/pain around the mouth area. Some object may be embedded depending on the cause (Fig. 1.9).

![Fig. 1.9: Mouth Injury](image)

Thus, in the above steps we learnt how to recognize head, spinal and other associated injuries. In the next section, we will discuss how to assess injuries. So, let’s continue.

### 1.3 ASSESSING A VICTIM OF HEAD, SPINAL AND ASSOCIATED INJURY

In this section, you will learn the skills for assessment of the victim with head, spinal and associated injuries.

**Purpose**

The main purpose of assessing the victim is to conduct assessment and provide first aid.
**Articles required**

For this activity you need to have a volunteer. However, he/she should be explained that they would have to be placed in a specific position by changing the posture.

**Procedure**

**Step 1**  Ask the volunteer to act as victim. Ask him/her to lie down on their back/sit as required.

**Skills:** The volunteer should sit/lie down comfortably. When lying he/she should lie on back with hand on the side of his/her body and both the feet straight.

**Step 2**  Conduct assessment as per the flow-diagram given below.

**Skills:** Perform Primary assessment and monitor any bleeding, injury, wound and check for fracture. Check to find out the requirement of the situation.

**Step 3**  Expose the area of Injury.

**Skills:** If the victim is wearing helmet, remove the helmet as given in Annexure 1 in this Practical.

**Step 4**  Assess the type of injury and give first aid

**Step 5**  Record and Report the findings, call for ambulance and Transport the victim.

**Skills:** The specific first aid has been discussed in Sections 1.4, 1.5 and 1.6 of this unit.
Therefore, in this section we learnt the steps of assessment of scene and the victim when the emergency has arisen and when the emergency involves head, spinal and other associated injuries. Now we will learn about the procedure for first aid in the upcoming sections. So, let’s proceed.

1.4 PROCEDURE FOR FIRST AID IN HEAD INJURY

When head injury occurs, wound gets formed in open wound. If the injury is closed, one needs to recognize the sign and symptoms for immediate care. In this section, we shall be discussing the procedure for first aid in open and closed head injury.

Articles required
The required articles are:

1) An adult volunteer to act as victim
2) Case scenario where the use of these articles is required e.g. injury to head, skull fracture, sports injury to head involving concussion or compression, falls etc.
3) First Aid Box
4) The standard articles required are dressing, triangular or roller bandages, splints, scissors, safety pins, adhesive tape, Antiseptic lotion, cotton, disposable hand gloves, waste bag, tourniquet/binder as required, soap and water supply, plastic bags, ring pad etc.

Improvised articles can be used as discussed in Unit 6 of previous Block on “First Aid with Improvisation”.

Steps of Procedure for First Aid in Open Head Injury
1) If no Foreign Body is Embedded in the Wound

Step 1  Wash hands.

Skills: This is important to prevent cross contamination.

Step 2  Make the victim or volunteer to sit or lie down.

Step 3  Wear Gloves if available.

Skills: The procedure for wearing gloves is discussed in Unit 9 of previous Block.

Step 4  Assess and Identify the Injury. See the wound, its depth, amount of bleeding and also monitor the person regularly.

Skills: Monitoring the victim is important because the injury to head can lead to decrease in consciousness in many cases. Use AVPU scale for monitoring the person. Assess CAB and be prepared to resuscitate the victim. Call for an ambulance.

Step 5  If you find any skin layers displaced due to injury, carefully replace them over the wound with your gloved hand and dressing.
Step 6  If you find bleeding, take a sterile gauze piece/clean cloth available and put pressure over the part.

Skills: Put gentle but firm pressure on the scalp for control of bleeding as also discussed in Unit 10 of previous Practical Block.

Step 7  After bleeding is controlled, clean the wound and perform wound care.

Skills: Wound care for open wound has been discussed in Unit 11 of the Block 1 of this Practical Course. Also remove any splinters, mud etc. if present in the wound using tweezers or cleaning with dettol using a dressing.

Step 8  Bandage the head by doing head bandaging as follows:

a)  If you have triangular bandage (Fig. 1.10):
   - Stand at the back of the victim/volunteer.
   - Fold back the base of the triangular bandage up-to about 2 inches on the outside.
   - Place the middle of the base of bandage on the forehead, just above the eyebrows.
   - Let the point of triangular bandage (as learnt in Unit 3 of previous practical Block) fall over the head and down over the back of the head.
   - Bring the ends of the triangle around the back of the head above the ears, cross them over the point, carry them around the forehead, and tie.
   - Hold the top firmly with one hand, and with the other, gently pull down the point until the bandage is snug.
   - Bring the point up and tuck it over and in the bandage where it crosses the back part of the head.
   - Secure with adhesive tape or safety pin.

b)  If you have roller bandage (Fig. 1.11):
   - Tie ends of two roller bandages together or open one roller bandage and wrap the two ends in a roll until both the ends reach the centre.
   - Stand at the back of the victim/volunteer.
   - Start from the forehead and carry the bandage to the back. Chose the one on your right hand for rolling and securing and the roll in your left hand for wrapping the head. Let this be bandage which is to be rolled circular around head also called as circular bandage.
Run the roll in right hand from back to front of the forehead. At the same time take the roll in the left hand over to the front. Let this be bandage which is rolled over head called as the wrapping bandage.

Cross these two bandages infront and pass back the wrapping bandage while rolling the circular bandage in circular turns around forehead.

Repeat the same at the back.

Now roll in recurrent turns to wrap the whole head, with every turn going left and right of the first turn, until the entire head is covered.

Secure the turns in front after the whole head is wrapped.

Fig. 1.11: Roller Bandage of Head

Step 9 Monitor the person for 24-48 hours.

*Skills:* It is important to monitor the person because head injury can be associated with injury to brain and changes in consciousness can point towards some bigger problem.


Step 11 Seek medical help.

2) In case of some Object Embedded in the Head

Step 1 Repeat Steps 1 to 4 as given above.

Step 2 Call for ambulance immediately.

Step 3 Place a rolled dressing or bandage around the object to stabilize it (Fig. 1.12).

Step 4 Place the ring pad around the object (Fig. 1.13).

Fig. 1.12: Placing rolled bandage  Fig. 1.13: Using ring pad on the affected area

*Skills:* Secure the ring pad around the object to control bleeding and support the area around the embedded object. Ring pad has been discussed in Unit 3 of Block 1 of Practical Course.

Step 5 Place extra dressing to secure object.
Step 6  Do roller bandaging of head as discussed above around the area to support the ring pad.

Step 7  Record and Report.

Step 8  Seek medical help immediately.

Steps of Procedure for First Aid in Closed Head Injury

Step 1  Wash the hands.

*Skills: This is important to prevent cross contamination.*

Step 2  Make the victim or volunteer to lie down or sit in comfortable position.

Step 3  Maintain the head in a stable position.

*Skills: Avoid unnecessary movements as the person may have severe complications.*

Step 4  Assess/Monitor the victim and identify the injury.

*Skills: Assess the person’s condition. Look for any wounds. Use AVPU scale for monitoring the person. Check CAB. Be ready to resuscitate as required. Call for an ambulance. In the victim has lost consciousness, assess and wait till consciousness is gained.*

Step 5  Use ice pack wrapped in a cloth or towel, if swelling is present.

*Skills: Already discussed in Unit 11 of Block 1 of Practical Course on Wound Care and Dressing.*

Step 6  Keep on monitoring, perform secondary assessment and Record and Report.

Step 7  Seek medical help as required.

Steps of Procedure for First Aid in Skull Fracture

Step 1  Wash the hands.

*Skills: This is important to prevent cross contamination.*

Step 2  Make the victim or volunteer lie down.

Step 3  Assess/Monitor the victim and identify the injury.

*Skills: Assess the person’s condition. Look for any wounds. Use AVPU scale for monitoring the person. Check the breathing and pulse. Be ready to resuscitate as required. Call for ambulance.*

Step 4  Maintain the head in a stable position while the victim is lying down.

*Skills: Avoid unnecessary movements as the person may have severe complications.*

Step 5  If you find any skin layers displaced due to injury, carefully replace them over the wound.

Step 6  If you find bleeding, take a sterile gauze piece/clean cloth available cover the bleeding site.

*Skills: Put no pressure on the fracture site in case of this injury*
**Step 7** Cover ear with sterile dressing and secure with triangular head bandage as explained earlier, if you suspect CSF leakage.

**Skills:** As already discussed in Theory Unit 2 of Block 3, the Skull fracture is associated with CSF leakage which is clear watery fluid. So for such victim, cover the ear with dressing in order to control the leakage to the outside. But don’t plug it the ear.

**Step 8** If the person is vomiting, help him by supporting and giving some utensil or bag to do vomit. If he is unconscious place in recovery position (discussed in Unit 7 of Practical Block 1) to prevent choking (Fig. 1.14).

**Skills:** This will help to remove the vomitus/secretions from the body.

![Fig. 1.14: Recovery Position](image)

**Step 9** Record and Report. Perform secondary assessment. Check vital signs.

**Step 10** Transport the victim and seek medical help urgently.

Thus, by the above procedure we discussed how to provide first aid in case of head injury. In the next section we will discuss the first aid in case of spinal injury.

## 1.5 PROCEDURE FOR FIRST AID IN SPINAL INJURY

In this section, we will be discussing regarding first aid in Spinal Injury.

**Articles required**

The required articles are:

1) An adult volunteer to act as victim

2) Case scenario where the use of these articles is required e.g. injury to spine, neck

3) First Aid Box

4) The standard articles required are dressing, triangular or roller bandages, scissors, safety pins, adhesive tape, Antiseptic lotion, cotton, disposable hand gloves, waste bag, tourniquet/binder as required, soap and water supply, plastic bags, ring pad, bricks, pillows etc. You will require a spinal board.

Improvised articles can be used as discussed in Unit 6 of previous Block on “First Aid with Improvisation”. 
Steps of Procedure for First Aid in Spinal Injury

Step 1  Ask the volunteer/victim to lie down. Maintain the position as lying down on floor/hard surface.

**Skills:** It is important to maintain the victim’s position and not to unnecessarily move him/her especially if Spinal injury is suspected. Call for ambulance.

Step 2  Assess and Identify the Injury. Stand near the head side of the victim and stabilize the head as also discussed in Unit 4 on Log rolling the victim in Section 4.3 of previous Practical Block (Fig. 1.15).

![Fig. 1.15: Stabilize the head of victim](image)

**Skills:** It is important to maintain the victim’s position and not to unnecessarily move him/her. If the person vomits or you suspect bleeding from mouth on which the person might choke, you need to turn the person, using the log roll technique with support to body.

Step 3  Ask 3 bystanders to help you.

Step 4  Now logroll the victim as learnt in the Unit 4 of Block 1 of Practical Course of this Programme and place on stretcher or spinal board.

**Skills:** Once on the spinal board or stretcher, Immobilize head with cushions of folded layers of newspapers, purse, handbag etc on either side of head/neck so that the head cannot be moved by the person to restrict the head/neck movements. (Fig. 1.16)

![Fig. 1.16: Immobilize head](image)

Step 5  Record and Report

Step 6  Transport the victim to medical facility immediately.

Hence, this is the procedure for first aid in Spinal Injury.
1.6 PROCEDURE FOR FIRST AID IN ASSOCIATED INJURIES

In this section we shall be discussing regarding first aid in associated injuries of eye, ear, nose, jaw and mouth as these injuries can most commonly accompany the head injury. Therefore, lets discuss the procedure for first aid in these injuries in this section.

Articles required

The required articles are:

1) An adult volunteer to act as victim
2) Case scenario where the use of these articles is required e.g. injury to eye, ear, nose, jaw, mouth.
3) First Aid Box
4) The standard articles required are dressing, triangular or roller bandages, scissors, safety pins, adhesive tape, Antiseptic lotion, cotton, disposable hand gloves, waste bag, tourniquet/binder as required, soap and water supply, plastic bags, ring pad etc. Improvised articles can be used as discussed in Unit 6 of previous Block on “First Aid with Improvisation”.

Steps of Procedure for First Aid in Eye Injuries

1) Eye Injury without any object embedded in the eye

Step 1  Wash your hands and wear gloves.

Step 2  Assess and Identify the Injury. Ask the volunteer/victim to lie or take a comfortable position as required.

Skills: The victim can either lie flat or sit or lie in half-sitting position. Take care of Do’s and Don’ts in the case of eye injury as discussed in Unit 2 of Theory Block 3. Call for ambulance.

Step 3  If bleeding is present, wipe off extra blood and control bleeding.

Skills: The procedure has been discussed in Unit 10 of Block 1 of this Practical Course.

Step 4  Cover eye with dressing and bandage the eye as follows:

a) If you have triangular bandage available, proceed as (Fig. 1.17):
Take one triangular bandage and fold it to form a cravat.

**Skills:** *The cravat is already discussed in Unit 3 of Block 1 of this practical Course.*

![Image](image1.png)

**Fig. 1.17: Application of triangular bandage for eye**

- Put the middle of cravat over the dressing over the eye.
- Apply around the eye and turn the ends over each other at back of head to carry around the forehead to tie a reef knot on ear of the opposite side.

b) If you have roller bandage available, proceed as (Fig. 1.18):

- Hold the roller bandage in one hand with the tail in the other hand.

  **Skills:** *Head and Tail of roller bandage have already been discussed in Unit 3 of Block 1 of practical Course.*

- Start by applying the bandage on the forehead above the affected eye and apply two circular turns.
- After the second turn from behind, bring the bandage below the ear near the affected eye and up over the affected eye.
- Then carry this around the head on unaffected eye side and then again bring the bandage down under the ear over the affected eye.
- Continue this until the bandage is completely used.
- In the end you will get a pattern where the affected eye is covered with bandage from down to up and head on the opposite side is covered from top to down
- Secure with adhesive tape.

![Image](image2.png)

**Fig. 1.18: Roller Bandage of eye**

**Step 5** Record and Report

**Step 6** Shift the victim to hospital.
2) **Eye Injury with object embedded in the eye**

**Step 1**  Place the victim in lying down/sitting position. Assess and Identify the Injury.

**Skills:** Call for ambulance.

**Step 2**  Soak off bleeding with dressing.

**Step 3**  Place heavy dressing folded from middle or rolled bandages /dressing around the embedded object (Fig. 1.19).

![Image of heavy dressing with folded bandages](image1.jpg)

**Fig. 1.19: Heavy dressing with folded bandages**

**Step 4**  Make a ring pad and pass it down to be placed over this dressing as done in previous step (Fig. 1.20).

**Skills:** The main aim is to use as many dressing around the impaled object that can stabilize the object till the victim reaches the hospital. You can also place cone, paper cup to cover the impaled object, if ring pad is not available.

![Image of forming ring pad](image2.jpg)

**Fig. 1.20: Forming ring pad**

**Step 5**  Keep extra dressing around the object over the previous dressing.

**Skills:** You can either cut dressing from middle to cover the ring pad, cone, paper cup etc and stabilize it by bandaging discussed later in step 7. If the object is bigger than cone or paper cup, then simply create a hole in the base of cone or paper cup and pass it out (Fig. 1.21).

![Image of covering eye with dressing and then paper cup](image3.jpg)

**Fig. 1.21:Cover the eye with dressing and then paper cup**

**Step 6**  Put a dressing on the unaffected eye also.

**Step 7**  Now roll a triangular bandage or roller bandage as follows (Fig. 1.22):
Hold the bandage.

Start from side of the affected eye and roll back around the head along with covering the unaffected eye with dressing placed over it.

Now take circular turns and completely cover around both eyes securely. If the foreign object is long, simply wrap the bandage and cover eyes on sides of object.

Continue this till the whole bandage is consumed and the padding is stabilized.

Secure with adhesive tape or knot.

Steps of Procedure for First Aid in Ear Injuries

1) Ear Injury without any object embedded in the ear

Step 1  Wash your hands and wear gloves. Assess and Identify the Injury.

Step 2  Ask the volunteer/victim to remain in semi-sitting position.

**Skills:** Call for the ambulance.

Step 3  Stand by the side of the victim so that the injured ear is towards you.

Step 4  If bleeding is present, wipe off extra blood and control bleeding.

**Skills:** The procedure has been discussed in Unit 10 of Block 1 of this Practical Course.

Step 5  Cover ear with dressing and bandage the ear as follows:

a) If you have triangular bandage available, proceed as (Fig. 1.23):

   ➢ Take a triangular bandages and fold it to form a cravat

   **Skills:** The cravat is already discussed in Unit 3 of Block 1 of this practical Course.

   ➢ Place middle of the cravat over the dressing on the ear.

   ➢ Pass the ends across the fore-head and tie a reef knot to secure it.
b) If you have roller bandage available, proceed as (Fig. 1.24):

- Hold the roller bandage in one hand with the tail in the other hand.
- Start by applying the bandage on the forehead above the affected ear and apply two turns.
- After the second turn from behind, bring the bandage at the lower part of ear and then carry it above in front to the top of the head on the opposite side.
- Now, bring it down again higher than the previous turn of the bandage on the ear and then carry it forward over the bandage on the head lower than the previous bandage already done.
- Repeat these steps.
- We will get a pattern where the bandage is higher than the previous turn on the ear and lower than the previous turn over the head. This will cover the ear from down to top and will cover the opposite side of head from top to down.
- Continue this until the bandage is completely used.
- Secure with adhesive tape/safety pin in the end.

![Fig. 1.24: Roller Bandage of Ear](image)

Step 6  Record and Report.
Step 7  Shift the victim to hospital.

2) Ear Injury with object embedded in the ear

Step 1  Place the victim in semi-sitting position. Assess and Identify the Injury.
Step 2  Soak off bleeding with dressing.

*Skills:* Call for ambulance.

Step 3  Place heavy dressing folded from middle or rolled bandages/dressing around the embedded object.

Step 4  Form a ring pad and pass it down to be placed over the dressing.

*Skills:* The main aim is to use as many dressings around the impaled object that can stabilize the object till the victim reaches the hospital. You can also place cone, paper cup to cover the impaled object, if ring pad is not available.

Step 5  Keep extra dressing around the object over the previous dressing.

*Skills:* You can either cut dressing from middle to cover the ring pad, cone, paper cup etc. and stabilize it. If the object is bigger than these articles simply create a hole in the base and pass it out.
Step 6  Now use triangular bandage or roller bandage as follows:
- Start from side of the affected ear and roll back around the head.
- Continue ear bandaging as discussed earlier along with stabilization of the ring pad or extra dressing applied around the impaled object.
- Continue this till the whole bandage is consumed and the padding is stabilized.
- Secure with adhesive tape or knot or safety pin.

Step 7  Record and Report

Step 8  Shift the victim to hospital.

Steps of Procedure for First Aid in Nose Injuries

Step 1  Wash your hands and wear gloves. Assess and Identify the Injury.

Step 2  Ask the volunteer/victim to sit with head leaning forward.

Skills: This has been discussed in Unit 10 of Block 1 of Practical Course in the section on First aid in Nose bleeding.

Step 3  If bleeding is present, wipe off extra blood and control bleeding.

Skills: The procedure has been discussed in Unit 10 of Block 1 of this Practical Course on First Aid in Nose Bleeding.

Step 4  Cover injury with dressing.

Step 5  Secure the dressing with adhesive tape.

Skills: If some object is embedded into the nose, try to control bleeding and rush to hospital.

Step 6  Record and Report

Step 7  Shift the victim to hospital.

Steps of Procedure for First Aid in Jaw Injuries

Step 1  Wash your hands and wear gloves. Assess and Identify the Injury.

Step 2  Ask the volunteer/victim to remain in sitting position.

Skills: Call for ambulance.

Step 3  Stand in front of the victim.

Step 4  If bleeding is present, wipe off extra blood and control bleeding.

Skills: The procedure has been discussed in Unit 10 of Block 1 of this Practical Course.

Step 5  Cover with dressing and triangular bandage as follows (Fig. 1.25):
- Take a triangular bandage and fold it to form a cravat.

Skills: The cravat is already discussed in Unit 3 of Block 1 of this practical Course.
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- Bring longer end over the head.
- Carry the small end towards the head.
- Cross these ends where they meet on side of head.
- Pass the ends around head and forehead in opposite directions.
- Tie a reef knot on the other side.

![Triangular bandage of Jaw](image)

**Fig. 1.25: Triangular bandage of Jaw**

**Step 6**  Record and Report .
**Step 7**  Shift the victim to hospital.

**Steps of Procedure for First Aid in Mouth Injuries**

**Step 1**  Wash your hands and wear gloves. Assess and Identify the Injury.

**Step 2**  Ask the volunteer/victim to remain in sitting position with head leaned towards injured side.

**Step 3**  Stand in front of the victim .

**Step 4**  If bleeding is present, wipe off extra blood and control bleeding.

**Skills:**  *The procedure has been discussed in Unit 10 of Block 1 of this Practical Course.*

**Step 5**  Cover with dressing.

**Step 6**  Check for depth and type of injury.

**Step 7**  If injury is small, then pressure will stop the bleeding and you can provide ice cubes to suck.

**Step 8**  If bleeding doesn’t stop or some object is embedded and injury is big and deep, shift to hospital immediately.

**Step 9**  Record and report.

Hence, in this section we learnt about first aid in head, spinal and associated injuries in various situations. With this we come to the end of this important unit on first aid management in Head, spinal and associated injuries.

1.7 **LET US SUM UP**

Thus, in this practical we studied the first aid in the case of head, spinal, eye, ear, nose, jaw and mouth injuries. It is fundamental to know these skills in emergency management of head, spinal and other associated injuries. Hope you will utilize these skills while encountering the head, spinal injuries and other associated injuries.
1.8 KEYWORDS

Bruising: Contusion/reddish-purple skin area due to injury
Paralysis: Loss of muscle function of the whole body/part of body
Swelling: Enlargement of some part of body
Tenderness: Pain or discomfort when some body area is touched
Snug: Fits closely or properly without gap
Cushions: Something providing support or protection
Accompany: Escort/help/assist someone
Impaled: Pierce or penetrate with a sharp instrument

1.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) a. False  b. False  c. True  d. True

1.10 ACTIVITIES

Activity 1
Enact a case scenario in which one of your friend has injured his jaw while falling down stairs. Practice the procedure for bandaging in this case. Record it in your Log-Book.
(Supervised Activity)

Activity 2
Take a case where two people are fighting. In this scenario, one person receives blow from other person. What will you do in this emergency? Record in your Log-book.
(Supervised Activity)

Activity 3
Practice a case scenario where a victim has fallen down from motor bike and injured his/her right ear. You are there to provide the first aid. Record your steps as you provide first aid in the Log-book.
(Supervised Activity)

Activity 4
Enact a case scenario where your friend decides to go on a ride. He quickly stands in a queue but skids and hurts his head. There is an open wound with blood gushing out. Practice the procedure of wound care and head bandaging. Record in log book.
(Supervised Activity)

Activity 5
Suppose a person has fallen from height and tells that he is unable to move himself. He feels a lot of pain in neck and back which makes him want to stop the movement. Practice first aid in his situation. Record in log book.
(Supervised Activity)
Activity 6

A person has road traffic accident and is wearing a helmet. Practice how to remove
the helmet and record in log-book.

(Supervised Activity)

1.11 REFERENCES

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**Removal of Helmet in Road Traffic Accident Victim**

You must remove the helmet from the head of the victim in case he has an accident and head/spinal injury is suspected. The major reasons to remove helmet can be any of the following:

- If presence of helmet is making assessment and management of airway problematic.
- If you wish to improve air supply to the victim which is hampered since he/she is wearing helmet.
- It prevents immobilization of the spine.
- It causes head movement within it.
- The victim is having cardiac arrest.
- The victim wishes to remove it due to discomfort.

**Requirement**: 2 rescuers or first aid providers must be present.

**The steps include the following**:

**Step 1** Sit on the head end of the victim. (Fig. 1.26) Ask the second rescuer or by stander to sit on the side.

**Step 2** Support the helmet between your arms to stabilize the victim’s head. In this case, place your arms on each side of helmet with the fingers on the victim’s mandible. This position prevents slippage if the strap if loose (Fig. 1.27).

**Step 3** Now ask the second rescuer to cut or loosens the strap (Fig. 1.28).
Step 4  After this guide the second rescuer to support the head of the victim as:

- Place one hand (non-dominant hand) on the mandible at the angle so that thumb is on one side and the index and middle finger is on the other.
- Tell him to take the other hand and place under the head so as to support the lower part of head (Fig. 1.29).

This will help stabilize the head while helmet is taken off.

Fig. 1.29: First rescuer supports the helmet and second supports the head

Step 5  Now, you (the first rescuer holding the helmet) must extend the lower end of helmet to increase its diameter.

Step 6  After loosening, gently slide (rock) the helmet out from the head (Fig. 1.30).

Fig. 1.30: Gently rock the helmet out of the head

Step 7  Remove the helmet and continue supporting the head by stabilizing it as discussed in Section 1.5 on first aid in Spinal Injury and also Unit 4 of previous Practical block (Section 4.3 on log-rolling the victim) (Fig. 1.31). The second rescuer can also remove his hands once you (first rescuer) support the head.

Fig. 1.31: Support the head

Step 8  Transport as ambulance arrives.