

Head and Spine Injuries

For Your Review

Read Chapter 14 of *Emergency Care*, then complete the following activities.

Key Terms

Referring to *Emergency Care*, define the following terms:

Cervical collar: _____

In-line stabilization: _____

Spinal column: _____

Spinal cord: _____

Vertebrae: _____

Do You Know...

1. Sequence of Events

Number the following steps in the correct sequence for immobilizing someone on a long backboard. (Assume that the patient is lying on his back.)

- _____ Position the backboard behind the patient
- _____ Secure the thighs to the board
- _____ Apply a cervical collar
- _____ Ensure the patient is in the correct position on the board
- _____ Immobilize the head to the board
- _____ Begin manual in-line stabilization
- _____ Check the back for injury
- _____ Secure the chest to the board
- _____ Secure the legs to the board
- _____ Log-roll the patient on his side
- _____ Log-roll the patient onto the board
- _____ Secure the hips to the board

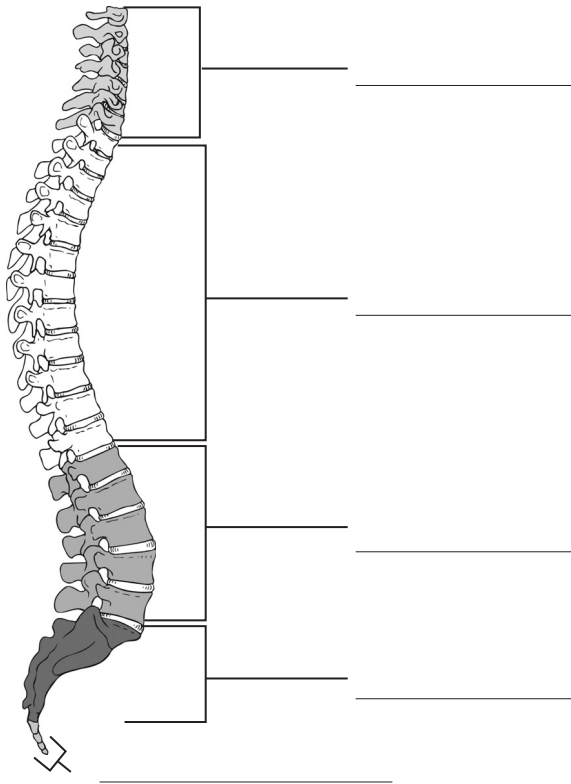
2. List eight signs and symptoms that indicate someone may have a head and/or spine injury.

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____
- vi. _____
- vii. _____
- viii. _____

Fill in the Blanks

1. The Spinal Regions

Label the five spinal regions.



What Would You Do?

Read the following scenarios and answer the questions below.

Scenario 1

There is a bar fight in the middle of town. You and your partner arrive and are ushered in by law enforcement personnel. One man is sitting on a stool holding his hand, which is cut and bruised. He has minor cuts on his face and arms. The other man is sitting on a chair, holding his face. Your partner moves towards the man on the stool, and you walk towards the man on the chair. When you look at his face, you see blood coming from his mouth and nose. He also has a black eye. He is having difficulty talking to you as it seems his jaw is broken.

1. You should suspect a head and/or spine injury in this situation. T or F
2. What is a major concern when there is injury to the mouth or jaw?

3. The man has lost two teeth. To control bleeding coming from the gums, you should:
 - a. Have him place a cloth over his mouth
 - b. Have him lean forward and open his mouth
 - c. Give him a rolled piece of gauze to put in the space where the teeth were
 - d. Put the teeth back in the sockets
4. If you find the teeth, you should:
 - a. Have the man put them in his pocket
 - b. Put them in a container of milk and keep them with the man
 - c. Discard them
 - d. Put them in a container of alcohol

Scenario 2

A roofer who was carrying a tool box falls off a ladder to the ground five metres (16 feet) below. He is lying on his back and is not moving. He is conscious. When the tool box came down, a nail fell and is now impaled in the roofer's eye. You also see some small cuts on his face, and there is fluid coming from his ears. His work crew are coming down off the roof to see what is happening.

1. What should you do first?
 - a. Immobilize the nail in his eye
 - b. Do a head-tilt/chin-lift and check for normal breathing
 - c. Put him in the recovery position
 - d. Minimize movement of his head and spine
2. You have applied manual in-line stabilization and are waiting to obtain more advanced care. The man vomits. What do you do?
 - a. Immediately turn the man's head to one side to drain the vomitus
 - b. Open the man's mouth using a jaw thrust and sweep out the vomitus
 - c. Ask one of the crew members to help you log-roll the man to the side and have the crew member roll the upper body while you maintain in-line stabilization
 - d. Ask one of the crew members to help you log-roll the man to the side and have the crew member roll the lower body while you roll the upper body
3. Why is a closed head injury a life-threatening problem?

4. How would you care for the eye with the impaled nail?

5. In which of the following cases would you suspect a head and/or spine injury?

- A conscious woman involved in a motor vehicle collision was not wearing a seat belt
- An unconscious teenager has been pulled out of the water after diving off a cliff near the side of a lake
- A miner's hard hat was cracked after a piece of debris fell on the hat
- All of the above

Test Your Knowledge

Circle the best answer to each of the following questions.

1. In which of the following cases should you NOT move the head of someone with a spinal injury?

- If there is severe angulation to one side
- If there is resistance when moving the head
- If the patient complains of pain when moving the head
- All of the above

2. If someone is bleeding from the scalp and there is a depression in the skull, how would you control the bleeding?

- Apply pressure to the carotid artery
- Apply pressure on the area around the wound
- Apply direct pressure on the wound
- Do not apply any pressure near the wound

3. Which of the following situations involving a nosebleed would indicate obtaining more advanced medical care?

- It is caused by high blood pressure
- It is the fourth nosebleed in a one-year period
- It is caused by low blood pressure
- It is the first nosebleed the patient has ever had

4. A patient is wearing a hockey helmet with a full face mask. In which of the following cases would you remove the helmet?

- Always remove the helmet right away
- The helmet is putting pressure on the back of the head and is causing a headache
- The helmet interferes with rescue breathing or stabilizing the head in line with the body
- Never remove the helmet

6. A soccer player sustains a possible concussion while out on the field. She says she feels okay now. It is the final game of the championships, and she is the star player. She should:

- Not return to the game
- Go on the field but try not to exert herself too much
- Go back to the game
- Switch positions with the goalie so she won't have to run as much

7. A change in which of the following vital signs may indicate a head injury?

- Pupils and level of consciousness
- Pulse and blood pressure
- Breathing rate
- All of the above

8. Eye injuries are usually life-threatening emergencies. T or F

9. If a neck injury is bleeding severely, you should:

- Apply pressure to the carotid artery
- Apply a pressure bandage, being careful not to constrict the carotid arteries
- Tape a bulky dressing over the wound
- Have the patient lie on his side with the injured side up