Import Settings:

Base Settings: Brownstone Default

Information Field: Complexity

Information Field: Ahead

Information Field: Subject

Information Field: Feedback

Information Field: Taxonomy

Information Field: Objective

Highest Answer Letter: D

Multiple Keywords in Same Paragraph: No

**Chapter: Head and Spine Trauma - Head and Spine Trauma - TBNK**

**Multiple Choice**

1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ consists of eight bones that encase and protect the brain.

A) skull

B) cerebrum

C) cranial vault

D) cribriform plate

Ans: C

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1713

Feedback: Anatomy and Physiology Review, page 1713

2. The brain connects to the spinal cord through a large opening at the base of the skull called the:

A) cribriform plate.

B) foramen magnum.

C) occipital condyle.

D) palatine bone.

Ans: B

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1718

Feedback: Anatomy and Physiology Review, page 1718

3. Paralysis of the extremities would MOST likely result from injury to the:

A) cerebellum.

B) diencephalon.

C) cerebral cortex.

D) hypothalamus.

Ans: C

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1714

Feedback: Anatomy and Physiology Review, page 1714

4. The parietal lobe of the brain:

A) is where the optic nerve originates and processes vision.

B) is important for voluntary motor action and personality traits.

C) controls the body’s ability to perceive body limb movement.

D) controls functions such as long-term memory, taste, and smell.

Ans: C

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1715

Feedback: Anatomy and Physiology Review, page 1715

5. Injury to the temporal lobe on the left side would MOST likely cause:

A) abnormal speech.

B) visual disturbances.

C) sleep abnormalities.

D) lack of coordination.

Ans: A

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Pages: 1715–1716

Feedback: Anatomy and Physiology Review, pages 1715–1716

6. The cerebellum is located in the \_\_\_\_\_\_\_\_\_\_\_\_ part of the brain and is responsible for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A) anteromedial, voluntary motor functions

B) inferoposterior, posture and equilibrium

C) anterolateral, short- and long-term memory

D) inferolateral, involuntary motor functions

Ans: B

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1716

Feedback: Anatomy and Physiology Review, page 1716

7. What portion of the brainstem is responsible for maintenance of consciousness?

A) Diencephalon

B) Limbic system

C) Basal ganglia

D) Reticular activating system

Ans: D

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1716

Feedback: Anatomy and Physiology Review, page 1716

8. The dura mater:

A) folds in to form the tentorium, a structure that separates the cerebral hemispheres from the cerebellum and brainstem.

B) is the middle meningeal layer and is comprised of a delicate transparent membrane that is damaged easily by trauma.

C) anatomically separates the cerebellum and the brainstem and contains vasculature that resembles a spider web.

D) is the inner meningeal layer and is comprised of a thin, translucent, highly vascular membrane that adheres firmly directly to the surface of the brain.

Ans: A

Complexity: Easy

Ahead: Anatomy and Physiology Review

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Feedback: Anatomy and Physiology Review, page 1716

9. Cerebrospinal fluid drainage from the ears is MOST indicative of:

A) a nasal fracture.

B) intracerebral bleeding.

C) an epidural hematoma.

D) a skull fracture.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Head Injuries

Subject: Head and Spine Trauma

Page: 1735

Feedback: Pathophysiology, Assessment, and Management of Head Injuries, page 1735

10. Death following a head injury is MOST often the result of:

A) an epidural hematoma.

B) trauma to the brain.

C) airway compromise.

D) spinal cord transection.

Ans: B

Complexity: Moderate

Ahead: The Incidence of Head Trauma

Subject: Head and Spine Trauma

Page: 1732

Feedback: The Incidence of Head Trauma, page 1732

11. Which of the following statements regarding a closed head injury is correct?

A) In a closed head injury, the dura mater remains intact.

B) Diffuse brain injury occurs with all open head injuries.

C) Closed head injuries are less common than open head injuries.

D) Intracranial pressure is usually minimal in a closed head injury.

Ans: A

Complexity: Moderate

Ahead: The Incidence of Head Trauma

Subject: Head and Spine Trauma

Page: 1733

Feedback: The Incidence of Head Trauma, page 1733

12. Bleeding from a scalp laceration with an underlying skull deformity:

A) may contribute to hypovolemia in adults.

B) commonly causes severe shock in adults.

C) should be controlled with firm direct pressure.

D) is limited due to the scalp's minimal vasculature.

Ans: A

Complexity: Moderate

Ahead: The Incidence of Head Trauma

Subject: Head and Spine Trauma

Page: 1733

Feedback: The Incidence of Head Trauma, page 1733

13. Which of the following types of skull fracture would be the LEAST likely to present with gross physical signs?

A) Open fracture

B) Depressed fracture

C) Basilar fracture

D) Linear fracture

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Head Injuries

Subject: Head and Spine Trauma

Page: 1734

Feedback: Pathophysiology, Assessment, and Management of Head Injuries, page 1734

14. A scalp laceration that occurs in conjunction with a nondisplaced skull fracture:

A) typically causes significant hypertension.

B) should be treated with firm direct pressure.

C) is considered to be an open skull fracture.

D) often causes an infection that progresses rapidly.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Head Injuries

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Feedback: Pathophysiology, Assessment, and Management of Head Injuries, page 1734

15. What type of skull fracture is MOST common following high-energy direct trauma to a small surface area of the head with a blunt object?

A) Depressed fracture

B) Open fracture

C) Basilar fracture

D) Nondisplaced fracture

Ans: A

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Head Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Head Injuries, page 1734

16. Which of the following signs of a basilar skull fracture would MOST likely be observed in the prehospital setting?

A) Battle's sign

B) Cerebrospinal fluid drainage from the ear

C) Ecchymosis around the eyes

D) Bruising over the mastoid process

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Head Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Head Injuries, page 1735

17. Open fractures of the cranial vault:

A) cause death due to increased intracranial pressure.

B) are associated with a high risk of bacterial meningitis.

C) typically cause lethal atrial cardiac dysrhythmias.

D) are uncommonly associated with multisystem trauma.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Head Injuries

Subject: Head and Spine Trauma

Page: 1734

Feedback: Pathophysiology, Assessment, and Management of Head Injuries, page 1734

18. Secondary brain injuries include all of the following, EXCEPT:

A) axonal injury.

B) cerebral edema.

C) cerebral ischemia.

D) intracranial hemorrhage.

Ans: A

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Page: 1736

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, page 1736

19. When an unrestrained passenger's head strikes the windshield of a motor vehicle following rapid deceleration:

A) the anterior portion of the brain sustains stretching or tearing injuries, and the posterior portion of the brain sustains compression injuries.

B) the head falls back against the headrest or seat and the brain collides with the rear of the skull, resulting in direct injury to the occipital lobe.

C) the brain initially strikes the rear of the skull, resulting in direct bruising, and then rebounds and strikes the front part of the skull.

D) compression injuries occur to the anterior portion of the brain, and stretching or tearing injuries occur to the posterior portion of the brain.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, page 1736

20. Following a traumatic brain injury, initial swelling of the brain occurs due to:

A) severe ischemia.

B) acute hypertension.

C) cerebral vasodilation.

D) an increase in cerebral water.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, page 1736

21. The MOST disastrous consequence of a severe traumatic brain injury is:

A) an increase in intracranial pressure.

B) an increase in mean arterial pressure.

C) severe hypertension and bradycardia.

D) a decrease in cerebral perfusion pressure.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Pages: 1736–1737

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, pages 1736–1737

22. Autoregulation is defined as:

A) reflex bradycardia that occurs secondary to systemic hypertension.

B) an increase in mean arterial pressure to maintain cerebral blood flow.

C) the forcing of cerebrospinal fluid into the spinal cord as ICP increases.

D) a decrease in cerebral perfusion pressure that reduces intracranial pressure.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Pages: 1736–1737

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, pages 1736–1737

23. Prehospital treatment of the patient with a traumatic brain injury must focus primarily on:

A) maintaining cerebral perfusion pressure.

B) hyperventilating the patient at 20 breaths/min.

C) maintaining a systolic BP of at least 120 mm Hg.

D) taking measures to decrease intracranial pressure.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Pages: 1736–1737

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, pages 1736–1737

24. Early signs and symptoms of increased intracranial pressure include:

A) headache and vomiting.

B) hypertension and bradycardia.

C) widening of the pulse pressure.

D) arm flexion and leg extension.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Page: 1738

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, page 1738

25. Decerebrate posturing is characterized by:

A) flexion of the arms and extension of the legs.

B) inward flexion of the wrists and flexed knees.

C) extension of the arms and extension of the legs.

D) pulling in of the arms toward the core of the body.

Ans: C

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Page: 1738

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, page 1738

26. Which of the following statements regarding a cerebral concussion is correct?

A) A cerebral concussion is a moderate focal brain injury.

B) Concussions are usually not associated with structural brain injury.

C) Prolonged loss of consciousness is common with a cerebral concussion.

D) A concussion results in permanent dysfunction of the cerebral cortex.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Pages: 1738–1739

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, pages 1738–1739

27. A diffuse axonal injury:

A) is a specific, grossly observable brain injury that can easily be diagnosed with a computer tomography scan of the head.

B) involves stretching, shearing, or tearing of the extension of the neuron that conducts electrical impulses away from the cell body.

C) results in severe stretching or tearing of the portion of the nerve cell that receives sensory messages from the rest of the body.

D) is generally associated with better neurologic outcomes than a cerebral concussion because permanent brain damage does not occur.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries

Subject: Head and Spine Trauma

Page: 1742

Feedback: Pathophysiology, Assessment, and Management of Traumatic Brain Injury and Diffuse Brain Injuries, page 1742

28. Unlike a cerebral concussion, a cerebral contusion is:

A) typically not associated with retrograde amnesia or focal neurologic deficits.

B) a type of diffuse axonal injury that often leads to permanent neurologic damage.

C) a diffuse brain injury that results in severe intracranial hemorrhage and pressure.

D) associated with physical brain damage and more pronounced neurologic deficits.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Focal Brain Injuries, page 1742

29. A moderate diffuse axonal injury:

A) is generally characterized by a brief loss of consciousness, with or without retrograde amnesia.

B) causes a prolonged loss of consciousness and affects axons in both cerebral hemispheres.

C) is the most common result of blunt head trauma and is associated with temporary neuronal dysfunction.

D) produces an immediate loss of consciousness and residual neurologic deficits when the patient wakes up.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Focal Brain Injuries, page 1743

30. An epidural hematoma typically causes rapid deterioration in the patient's condition because:

A) numerous axons are severely damaged.

B) the meningeal veins are often disrupted.

C) it is associated with brisk arterial bleeding.

D) concomitant spinal cord injury is often present.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Focal Brain Injuries, page 1743

31. Common clinical findings associated with a subdural hematoma include all of the following, EXCEPT:

A) rapidly increasing intracranial pressure.

B) an underlying skull fracture.

C) a fluctuating level of consciousness.

D) unilateral hemiparesis or slurred speech.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

Subject: Head and Spine Trauma

Pages: 1744–1745

Feedback: Pathophysiology, Assessment, and Management of Focal Brain Injuries, pages 1744–1745

32. A subdural hematoma is classified as acute if clinical signs and symptoms develop:

A) immediately following the injury.

B) within 24 hours following the injury.

C) within 36 hours following the injury.

D) within 48 hours following the injury.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

Subject: Head and Spine Trauma

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33. Chronic subdural hematomas are MOST commonly seen in patients who:

A) are less than 2 years of age.

B) have alcoholism.

C) are prone to hypoglycemia.

D) have high cholesterol.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

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Page: 1745

Feedback: Pathophysiology, Assessment, and Management of Focal Brain Injuries, page 1745

34. What type of intracranial hemorrhage would MOST likely be caused by a penetrating head injury?

A) Subdural hematoma

B) Intracerebral hematoma

C) Epidural hematoma

D) Subarachnoid hemorrhage

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Focal Brain Injuries, page 1745

35. Nuchal rigidity is MOST commonly seen in patients with a(n):

A) subdural hematoma.

B) epidural hematoma.

C) intracerebral hematoma.

D) subarachnoid hemorrhage.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Focal Brain Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Focal Brain Injuries, page 1745

36. When assessing the severity of a traumatic brain injury, the MOST important assessment parameter is the patient's:

A) initial Glasgow Coma Scale score.

B) blood pressure.

C) level of consciousness.

D) response to verbal stimuli.

Ans: C

Complexity: Moderate

Ahead: Patient Assessment of Head and Spine Injuries

Subject: Head and Spine Trauma

Pages: 1724–1725

Feedback: Patient Assessment of Head and Spine Injuries, pages 1724–1725

37. Pupils that are slow (sluggish) to react to light:

A) are a sign of cerebral hypoxia.

B) indicate impending brain herniation.

C) suggest significant intracranial pressure.

D) indicate compression of an oculomotor nerve.

Ans: A

Complexity: Moderate

Ahead: Patient Assessment of Head and Spine Injuries

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Feedback: Patient Assessment of Head and Spine Injuries, page 1727

38. Hyperventilation of the brain-injured patient:

A) shunts oxygen away from the brain and may result in decreased cerebral perfusion pressure.

B) has clearly demonstrated decreased mortality and morbidity in patients with a severe head injury.

C) causes cerebral vasodilation with increased intracranial pressure and should be avoided.

D) is only appropriate if the patient is unresponsive and has bilaterally dilated and sluggishly reactive pupils.

Ans: A

Complexity: Moderate

Ahead: Patient Assessment of Head and Spine Injuries

Subject: Head and Spine Trauma

Page: 1722

Feedback: Patient Assessment of Head and Spine Injuries, page 1722

39. A 19-year-old woman fell from a second story window and landed on her head. She is unconscious with a blood pressure of 168/104 mm Hg, heart rate of 56 beats/min, and irregular respirations of 8 breaths/min. Further assessment reveals blood draining from her nose and bilaterally dilated pupils that are slow to react. In addition to employing full spinal precautions, the MOST appropriate treatment for this patient involves:

A) hyperventilating her with a bag-mask device at a rate of 20 breaths/min, starting two large-bore IV lines, applying a cardiac monitor, administering 5 mg of Valium to prevent seizures, and transporting to a trauma center.

B) preoxygenating her with a bag-mask device and 100% oxygen for 2 to 3 minutes, performing nasotracheal intubation, transporting at once, starting at least one large-bore IV line en route, and obtaining her Glasgow Coma Scale score.

C) intubating her trachea after preoxygenating her for 2 to 3 minutes with a bag-mask device, transporting immediately, starting at least one large-bore IV en route, applying a cardiac monitor, and performing frequent neurologic assessments.

D) applying oxygen via nonrebreathing mask, covering her with blankets, starting an IV of normal saline set to keep the vein open, applying a cardiac monitor, initiating transport, and monitoring her pupils while en route to the hospital.

Ans: C

Complexity: Difficult

Ahead: Patient Assessment of Head and Spine Injuries

Subject: Head and Spine Trauma

Pages: 1721–1723

Feedback: Patient Assessment of Head and Spine Injuries, pages 1721–1723

40. A male patient with a closed head injury opens his eyes in response to pain, makes incomprehensible sounds, and responds to pain with flexion of his arms. His Glasgow Coma Scale score is \_\_\_, and the MOST appropriate treatment for him involves:

A) 6; intubation, hyperventilation at a rate of 20 breaths/min, two large-bore IV lines running wide open, keeping him warm, and maintaining his oxygen saturation at greater than 90%.

B) 7; intubation, ventilations performed at a rate of 12 breaths/min, IV fluids as needed to maintain a systolic blood pressure of at least 90 mm Hg, and maintaining his oxygen saturation at greater than 90%.

C) 8; ventilation assistance with a bag-mask device, a 2-L bolus of normal saline or lactated Ringer solution, elevating his head 12 inches, and hyperventilating him if his heart rate falls below 60 beats/min.

D) 9; high-flow oxygen via nonrebreathing mask, IV fluids as needed to maintain a systolic blood pressure of at least 100 mm Hg, monitoring his oxygen saturation, and administering 1.5 mg/kg of lidocaine to decrease intracranial pressure.

Ans: B

Complexity: Difficult

Ahead: Patient Assessment of Head and Spine Injuries

Subject: Head and Spine Trauma

Pages: 1721–1723

Feedback: Patient Assessment of Head and Spine Injuries, pages 1721–1723

41. The MOST effective method for decreasing morbidity and mortality associated with spinal cord injury is:

A) rapid transportation to a trauma center.

B) public education and prevention strategies.

C) minimizing scene time to 10 minutes or less.

D) routine use of spinal motion restriction precautions.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1747

42. According to the National Spinal Cord Injury Statistical Center, MOST spinal cord injuries are caused by:

A) acts of violence.

B) athletic activities.

C) falls in the elderly.

D) motor vehicle crashes.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1747

43. The LEAST common cause of death in spinal cord injury patients who are discharged from the hospital is:

A) pneumonia.

B) septicemia.

C) muscular atrophy.

D) pulmonary embolism.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1747

44. The anterior weight-bearing structure of the vertebra is the:

A) pedicle.

B) vertebral body.

C) lamina.

D) spinous process.

Ans: B

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1717

Feedback: Anatomy and Physiology Review, page 1717

45. As the body ages, the intervertebral discs:

A) calcify and become more rigid.

B) enlarge and result in increased height.

C) are not able to protect the spinal cord.

D) lose water content and become thinner.

Ans: D

Complexity: Easy

Ahead: Anatomy and Physiology Review

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Page: 1717

Feedback: Anatomy and Physiology Review, page 1717

46. The \_\_\_\_\_\_\_\_\_\_ is the largest component of the central nervous system and contains billions of neurons that serve a variety of functions.

A) brain

B) medulla

C) cerebellum

D) spinal cord

Ans: A

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1714

Feedback: Anatomy and Physiology Review, page 1714

47. Which of the following statements regarding the brainstem is correct?

A) The brainstem provides protection to the cerebellum.

B) The brainstem is responsible for muscle coordination.

C) All but 4 of the 12 cranial nerves exit the brainstem.

D) The brainstem connects the spinal cord to the brain.

Ans: D

Complexity: Moderate

Ahead: Anatomy and Physiology Review

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Page: 1716

Feedback: Anatomy and Physiology Review, page 1716

48. The innermost meningeal layer that rests directly on the brain and spinal cord is the:

A) cortex.

B) arachnoid.

C) pia mater.

D) dura mater.

Ans: C

Complexity: Moderate

Ahead: Anatomy and Physiology Review

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Feedback: Anatomy and Physiology Review, page 1716

49. The crescent-shaped fold that divides the cerebrum into left and right hemispheres is called the:

A) tentorium.

B) falx cerebelli.

C) diencephalon

D) mesencephalon

Ans: B

Complexity: Easy

Ahead: Anatomy and Physiology Review

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Feedback: Anatomy and Physiology Review, page 1714

50. The phrenic nerve arises from the \_\_\_\_\_\_\_\_\_ plexus and innervates the \_\_\_\_\_\_\_.

A) sacral, lower limbs

B) cervical, diaphragm

C) lumbar, abdominal wall

D) brachial, upper extremities

Ans: B

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1718

Feedback: Anatomy and Physiology Review, page 1718

51. What spinal nerve tract carries information regarding pain and temperature?

A) Corticospinal

B) Spinocerebellar

C) Reticulospinal

D) Lateral spinothalamic

Ans: D

Complexity: Easy

Ahead: Anatomy and Physiology Review

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Feedback: Anatomy and Physiology Review, page 1718

52. Beta receptor stimulation results in all of the following effects, EXCEPT:

A) positive cardiac inotropy.

B) positive cardiac chronotropy.

C) vascular smooth muscle contraction.

D) relaxation of bronchiole smooth muscle.

Ans: C

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

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Feedback: Anatomy and Physiology Review, page 1719

53. Vagal tone remains intact following a spine injury because:

A) the vagus nerve originates outside the medulla and regulates the heart via the carotid arteries.

B) parasympathetic nerve fibers are largely under the control of the involuntary nervous system.

C) the nerve fibers of the parasympathetic nervous system do not originate from the brainstem or spinal cord.

D) the thoracolumbar system provides parasympathetic stimulation to the periphery via alpha and beta receptors.

Ans: A

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Head and Spine Trauma

Page: 1719

Feedback: Anatomy and Physiology Review, page 1719

54. Flexion injuries to the spine would MOST likely result from:

A) rapid acceleration forces.

B) rapid deceleration forces.

C) a rear-end motor vehicle crash.

D) a direct blow to the frontal lobe.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1748

55. The only area of the spine that allows for significant rotation is:

A) C1–C2.

B) C2–C4.

C) C6–C7.

D) T1–T2.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1748

56. A compression or burst fracture of the cervical spine would MOST likely occur following:

A) a direct blow to the occipital region of the skull.

B) rapid acceleration following a motor vehicle crash.

C) axial loading after a patient falls and lands feet first.

D) a significant fall in which the patient lands head first.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

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Pages: 1748–1749

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, pages 1748–1749

57. Which of the following statements regarding the hangman's fracture is correct?

A) Hangman's fractures occur when the patient's skull rapidly accelerates.

B) Most hangman's fractures occur during a fall from greater than 10 feet.

C) It is a fracture of C2 that is secondary to significant distraction of the neck.

D) Severe hyperflexion of the neck commonly results in a hangman's fracture.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1749

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1749

58. In contrast to secondary spinal cord injury, primary spinal cord injury occurs:

A) from progressive swelling.

B) at the moment of impact.

C) from penetrating mechanisms.

D) within 24 hours of the injury.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1750

59. A spinal cord concussion is:

A) caused by a short-duration shock or pressure wave within the cord.

B) a condition that results in a permanent loss of neurologic function.

C) characterized by temporary dysfunction that lasts for up to 1 week.

D) the result of direct trauma and is associated with spinal cord edema.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1750

60. Which of the following factors would be the LEAST likely to result in secondary spinal cord injury?

A) Inflammation

B) Hypothermia

C) Hyperglycemia

D) Hypoxemia

Ans: C

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1750

61. The MOST effective way for the paramedic to minimize further injury in a patient with a spinal injury is:

A) prompt transport of the patient to a trauma center.

B) rapid administration of corticosteroid medications.

C) aggressive administration of IV crystalloid solutions.

D) spinal motion restriction and prevention of heat loss.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1750

62. A complete spinal cord injury to the upper cervical spine:

A) results in quadriplegia but the patient usually retains his or her ability to breathe spontaneously.

B) is not compatible with life and results in immediate death due to cardiopulmonary failure.

C) will result in permanent loss of all cord-mediated functions below the level of the injury.

D) results in neurologic dysfunction that is considered to be permanent if it lasts longer than 24 hours.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1750

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1750

63. Displacement of bony fragments into the anterior portion of the spinal cord results in:

A) central cord syndrome.

B) anterior cord syndrome.

C) Brown-Séquard syndrome.

D) complete spinal cord injury.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1751

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1751

64. Which of the following statements regarding central cord syndrome is correct?

A) The patient typically presents with greater loss of function in the upper extremities than in the lower extremities.

B) Central cord syndrome is almost always associated with a vertebral fracture and has an overall poor prognosis.

C) Patients with cervical spondylosis or stenosis are at a lower risk for central cord syndrome following an injury.

D) Central cord syndrome typically causes complete paralysis of the lower extremities and decreased proprioception.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1751

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1751

65. Proprioception is defined as:

A) a person's ability to sense light touch.

B) the loss of thermoregulatory function distal to an injury.

C) a person's awareness of pain and the ability to localize it.

D) the ability to perceive the position and movement of one's body.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1751

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1751

66. What spinal cord injury is characterized by motor loss on the same side as the injury, but below the lesion?

A) Central cord syndrome

B) Brown-Séquard syndrome

C) Anterior cord syndrome

D) Posterior cord syndrome

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1751

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1751

67. Spinal shock is a condition that:

A) generally affects the sensory nerves but spares the motor nerves.

B) is usually temporary and results from swelling of the spinal cord.

C) typically manifests within 24 to 36 hours following a spinal injury.

D) results in permanent neurologic deficits in the majority of patients.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1751

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1751

68. Signs of neurogenic shock include all of the following, EXCEPT:

A) bradycardia.

B) flushed skin.

C) diaphoresis.

D) hypothermia.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1752

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1752

69. Hypotension that is associated with neurogenic shock is the result of:

A) loss of alpha receptor stimulation.

B) concomitant internal hemorrhage.

C) increased peripheral vascular tone.

D) profound peripheral vasoconstriction.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1752

70. Patients with evidence of trauma above the \_\_\_\_\_\_\_\_\_ should be considered at risk for an associated spine injury.

A) diaphragm

B) pelvis

C) umbilicus

D) clavicles

Ans: D

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1727

Feedback: Patient Assessment of Head and Spinal Injuries, page 1727

71. In which of the following situations would spinal motion restriction precautions likely NOT be necessary?

A) Syncopal episode in which the patient was already seated or supine

B) Unrestrained occupant of moderate- to high-speed motor vehicle crash

C) Isolated head injury without gross signs or symptoms of a spinal injury

D) Vehicular damage with compartmental intrusion of greater than 12 inches

Ans: A

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1720

Feedback: Patient Assessment of Head and Spinal Injuries, page 1720

72. Modification of your physical examination of a patient with a suspected spinal cord injury following a two-car motor vehicle crash is based on all of the following factors, EXCEPT:

A) the mechanism of injury.

B) injuries to patients in the other vehicle.

C) the patient's level of consciousness.

D) reliability of the patient as a historian.

Ans: B

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1727

Feedback: Patient Assessment of Head and Spinal Injuries, page 1727

73. Which of the following conditions that can cause an airway obstruction is unique to patients with an injury to the upper cervical spine?

A) Retropharyngeal hematoma

B) Blood or secretions in the mouth

C) Oropharyngeal occlusion by the tongue

D) Improperly inserted oropharyngeal airway

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1749

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1749

74. Following a spinal injury, a patient presents with abdominal breathing and use of the accessory muscles in the neck. This suggests injury at or above:

A) C1–C2.

B) C3–C4.

C) T1–T4.

D) T2–T5.

Ans: B

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1722

Feedback: Patient Assessment of Head and Spinal Injuries, page 1722

75. A patient with diaphragmatic breathing *without* intercostal muscle use has MOST likely experienced a spinal injury above the level of:

A) C2.

B) C5.

C) C7.

D) T2.

Ans: D

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1722

Feedback: Patient Assessment of Head and Spinal Injuries, page 1722

76. Treatment for a patient with neurogenic shock may include all of the following, EXCEPT:

A) a vagolytic medication.

B) a vasopressor medication.

C) prevention of hyperthermia.

D) fluid volume to maintain perfusion.

Ans: C

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1723

Feedback: Patient Assessment of Head and Spinal Injuries, page 1723

77. Which of the following is a sign of a moderate elevation in intracranial pressure?

A) Irregular pulse rate

B) Unilaterally blown pupil

C) Widened pulse pressure

D) Biot (ataxic) respirations

Ans: C

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1728

Feedback: Patient Assessment of Head and Spinal Injuries, page 1728

78. Prior to immobilizing an anxious patient with a suspected spinal injury on a backboard, it is important to:

A) ask the patient to pull against your hands with his or her feet.

B) make note of any neurologic deficits or gross injuries up to that point.

C) administer the appropriate dose of a sedative to facilitate patient compliance.

D) apply a cervical collar to free up the medic that is holding the patient's head.

Ans: B

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1725–1726

Feedback: Patient Assessment of Head and Spinal Injuries, pages 1725–1726

79. The main disadvantage of using a scoop stretcher to transfer a patient to a long backboard is:

A) inability to conduct a visual exam of the back for injuries.

B) patient discomfort due the cold metal frame of the scoop.

C) unnecessary patient movement and the risk for further harm.

D) inability to palpate the spinal vertebrae for gross deformities.

Ans: A

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1725–1726

Feedback: Patient Assessment of Head and Spinal Injuries, pages 1725–1726

80. The MOST significant complication associated with prolonged immobilization of a patient on a long backboard is:

A) pressure lesion development.

B) compression of the vena cava.

C) increased intracranial pressure.

D) patient discomfort and frustration.

Ans: A

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1726

Feedback: Patient Assessment of Head and Spinal Injuries, page 1726

81. If the mechanism of injury indicates that your patient may have sustained a spinal cord injury:

A) contact medical control to determine if spinal immobilization is needed.

B) assume that a spine injury exists, regardless of the neurologic findings.

C) apply a cervical collar and transport the patient in a position of comfort.

D) fully immobilize the spine only if gross neurologic deficits are present.

Ans: B

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1729

Feedback: Patient Assessment of Head and Spinal Injuries, page 1729

82. The FIRST step in any neurologic assessment involves:

A) obtaining an initial Glasgow Coma Scale score.

B) asking the patient if he or she can feel or move.

C) determining the patient's level of consciousness.

D) assessing the pupils for size, equality, and reactivity.

Ans: C

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1729

Feedback: Patient Assessment of Head and Spinal Injuries, page 1729

83. When assigning a Glasgow Coma Scale (GCS) score to a patient who has limb paralysis due to a spinal cord injury, you should:

A) score the patient as having no motor response.

B) ask the patient to blink or move a facial muscle.

C) exclude the motor response portion of the GCS.

D) use another method for assessing neurologic function.

Ans: B

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1729

Feedback: Patient Assessment of Head and Spinal Injuries, page 1729

84. Horner syndrome is identified when a patient with a spinal injury:

A) has a drooping upper eyelid and small pupil.

B) can move his or her arms, but not the legs.

C) cannot close his or her fingers against resistance.

D) is unable to identify the left arm from the right arm.

Ans: A

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1729

Feedback: Patient Assessment of Head and Spinal Injuries, page 1729

85. Wrist extension is controlled at the level of:

A) C4

B) C5

C) C6

D) T1

Ans: C

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1729

Feedback: Patient Assessment of Head and Spinal Injuries, page 1729

86. Hyperacute pain to touch is called:

A) parasthesia.

B) anesthesia.

C) hyperesthesia.

D) akathisia.

Ans: C

Complexity: Easy

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1730

Feedback: Patient Assessment of Head and Spinal Injuries, page 1730

87. A positive Babinski reflex is observed when the:

A) toes curve or move downward when the sole of the foot is touched.

B) patient responds to pain by flexing the arms and extending the legs.

C) patient's reflexes are hyperactive in response to an external stimulus.

D) toes move upward in response to stimulation of the sole of the foot.

Ans: D

Complexity: Easy

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1730

Feedback: Patient Assessment of Head and Spinal Injuries, page 1730

88. Spinal cord injuries that cause neurogenic shock generally produce:

A) cool, clammy skin distal to the site of the spinal cord injury.

B) reflex tachycardia due to sympathetic nervous system stimulation.

C) flaccid paralysis and complete loss of sensation distal to the injury.

D) signs and symptoms that are identical to those of hypovolemic shock.

Ans: C

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1730–1731

Feedback: Patient Assessment of Head and Spinal Injuries, pages 1730–1731

89. When moving an injured patient from the ground onto a long backboard, it is preferred that you:

A) slide the patient onto the backboard.

B) use the four-person log roll technique.

C) log roll the patient away from you.

D) use a scoop stretcher to move the patient.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1758

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1758

90. When immobilizing a patient to a long backboard, you should take standard precautions and then:

A) ensure that the patient's head is stabilized manually.

B) assess distal pulse, sensory, and motor functions.

C) log roll the patient as a unit and assess his or her back.

D) apply the appropriately sized cervical collar to the patient.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1757

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1757

91. An injured patient's head should be secured to the long backboard only after:

A) you have placed padding under the shoulders.

B) his or her torso has been secured adequately.

C) both of the legs are secured to the board properly.

D) a vest-style immobilization device has been applied.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1758–1762

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, pages 1758–1762

92. Spinal cord injury without radiographic abnormalities can occur in children because:

A) their vertebrae lie flatter on top of each other.

B) they have excessive mobility of C1 and C2.

C) unlike adults, their vertebrae are more curved.

D) their spinal cord is more compressed than an adult's.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1752

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1752

93. In which of the following situations would it be MOST appropriate to apply a vest-type extrication device or a short backboard to a patient who is seated in his or her crashed motor vehicle?

A) Conscious with bilateral femur fractures

B) Unconscious with obvious spinal deformity

C) Confused with lower back pain and tachycardia

D) Conscious with neck pain and stable vital signs

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1764

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1764

94. When immobilizing a sitting patient with a vest-type extrication device or short backboard, you should manually stabilize his or her head and then:

A) apply an appropriately sized cervical collar.

B) perform a rapid assessment to detect life threats.

C) assess distal pulse and sensory and motor functions.

D) carefully place the vest device behind the patient.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1765

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1765

95. When applying a vest-type extrication device or short backboard to a seated patient, his or her head should be secured to the device:

A) after you apply a cervical collar.

B) only after the torso is fastened securely.

C) before you secure his or her torso.

D) after he or she is moved to a long backboard.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1766

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1766

96. If a trauma patient cannot be assessed properly in his or her vehicle, you should:

A) apply a rigid cervical collar, perform a rapid assessment only, and then remove the patient with the two-person lift technique.

B) maintain manual stabilization of the head, apply a cervical collar, and move the patient from the vehicle onto a long backboard.

C) apply a vest-type extrication device and then rapidly remove him or her from the vehicle using at least three people.

D) grasp the patient behind the shoulders, cradle his or her head in your arms to protect the spine, and rapidly extricate him or her from the car.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1766–1767

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 17

97. You would MOST likely have to place several blankets or pillows under a patient's upper back prior to immobilization if he or she has:

A) kyphosis.

B) osteoarthritis.

C) spondylosis.

D) osteoporosis.

Ans: A

Complexity: Moderate

Ahead: Nontraumatic Spinal Conditions

Subject: Head and Spine Trauma

Pages: 1769, 1774

Feedback: Nontraumatic Spinal Conditions, pages 1769, 1774

98. Regardless of the method of spinal immobilization used, you must:

A) always secure the head before the torso.

B) secure the patient in the position found.

C) keep the head, neck, and trunk in alignment.

D) stabilize the head using slight manual traction.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1770

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1770

99. A motorcycle or football helmet should be removed if:

A) the patient complains of severe neck pain and the helmet fits snugly.

B) you are going to transport the patient to a medical treatment facility.

C) the patient is breathing shallowly and access to the airway is difficult.

D) you are properly trained in the technique, even if you are by yourself.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1770–1772

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, pages 1770–1772

100. A patient with a possible spinal injury is acutely agitated. What type of medication, if any, should he or she receive after hypoxia has been ruled out?

A) Corticosteroid

B) Neuromuscular blocker

C) Dissociative anesthetic

D) Short-acting, reversible sedative

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1772–1773

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, pages 1772–1773

101. You are dispatched to a senior citizen's center where an elderly woman fainted. When you arrive, you find the patient sitting in a chair. An employee of the center tells you that he caught the patient before she fell to the ground. Your primary assessment reveals that the patient is conscious and alert and is breathing adequately. You should:

A) forego spinal immobilization and transport only.

B) obtain vital signs and assess her blood glucose level.

C) apply oxygen at 15 L/min via nonrebreathing mask.

D) perform a rapid head-to-toe assessment to detect injuries.

Ans: B

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1728

Feedback: Patient Assessment of Head and Spinal Injuries, page 1728

102. A 45-year-old unrestrained man was ejected from his small truck when it struck a tree. The patient is found approximately 20 feet from the wreckage. Your primary assessment reveals that he is unresponsive and has sonorous respirations and a rapid pulse. Your initial actions should include:

A) applying a cervical collar and assisting his ventilations with a bag-mask device.

B) rolling the patient onto his side as a unit and suctioning his mouth for 15 seconds.

C) performing a tongue-jaw lift and looking in his mouth for any obvious obstructions.

D) manually stabilizing his head and opening his airway with the jaw-thrust maneuver.

Ans: D

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1721

Feedback: Patient Assessment of Head and Spinal Injuries, page 1721

103. You have intubated an unresponsive, apneic patient with a suspected spinal injury. After confirming proper ET tube placement and securing the tube, you should:

A) request medical control authorization to give Solu-Medrol.

B) ventilate at 10 to 12 breaths/min and monitor end-tidal CO2.

C) maintain an end-tidal CO2 reading of greater than 45 mm Hg.

D) provide mild hyperventilation in case a head injury is present.

Ans: B

Complexity: Moderate

Ahead: Patient Assessment of Head and Spine Injuries

Subject: Head and Spine Trauma

Page: 1722

Feedback: Patient Assessment of Head and Spinal Injuries, page 1722

104. You are assessing a patient who sustained blunt trauma to the center of her back. She is conscious, but is unable to feel or move her lower extremities. Her blood pressure is 80/50 mm Hg, pulse is 40 beats/min and weak, and respirations are 24 breaths/min and shallow. If IV fluids do not adequately improve perfusion, you should:

A) give 0.5 mg of atropine and consider a dopamine infusion.

B) administer 1 mg of epinephrine 1:10,000 via rapid IV push.

C) administer a sedative and paralytic and then intubate his trachea.

D) administer a corticosteroid to reduce spinal cord inflammation.

Ans: A

Complexity: Difficult

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1723

Feedback: Patient Assessment of Head and Spinal Injuries, page 1723

105. A skier wiped out while skiing down a large hill. He is conscious and alert and complains of being very cold; he also complains of neck stiffness and numbness and tingling in all of his extremities. A quick assessment reveals that his airway is patent and his breathing is adequate. You should:

A) perform a detailed neurologic exam and carefully palpate his neck.

B) apply a cervical collar and start an IV line with warm normal saline.

C) immobilize his spine and quickly move him to a warmer environment.

D) administer oxygen and perform a detailed secondary assessment.

Ans: C

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Page: 1725

Feedback: Patient Assessment of Head and Spinal Injuries, page 1725

106. Following a traumatic injury, a 19-year-old woman presents with confusion, tachycardia, and hypotension. Her skin is cool, clammy, and pale. Further assessment reveals abdominal rigidity and deformity with severe pain over her thoracic vertebrae. In addition to administering high-flow oxygen and immobilizing her spine, you should:

A) start at least one large-bore IV line and give crystalloid boluses as needed to maintain adequate perfusion.

B) conclude that she is in neurogenic shock, start an IV line of normal saline, and initiate a dopamine infusion.

C) start at least one large-bore IV of normal saline and administer a narcotic analgesic to treat her severe pain.

D) perform a focused history and physical exam, start an IV of normal saline, and administer a corticosteroid.

Ans: A

Complexity: Moderate

Ahead: Patient Assessment of Head and Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1722–1723

Feedback: Patient Assessment of Head and Spinal Injuries, pages 1722–1723

107. You have just completed spinal immobilization of a hemodynamically stable patient with a possible spinal injury. Prior to moving the patient to the ambulance, it is MOST important to:

A) start an IV of normal saline in case the patient deteriorates.

B) apply a cardiac monitor and obtain a full set of vital signs.

C) perform a detailed secondary assessment to detect other injuries.

D) reassess pulse, motor, and sensory functions in all extremities.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1759–1762

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, pages 1759–1762

108. The cervical collar is designed to:

A) maintain a neutral position and eliminate all flexion, extension, and lateral movement of the head.

B) reduce flexion and extension of the head and place the weight of the head on the shoulders.

C) simply remind the patient not to move his or her head in any direction until lateral stabilization is applied.

D) realign potentially unstable vertebral injuries and prevent movement of the head in all directions.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Page: 1757

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1757

109. Upon arriving at the scene of a motor vehicle crash, you find the driver of the car still seated in her two-door vehicle. The passenger side of the vehicle has sustained severe damage and is inaccessible. The driver is conscious and alert and complains only of lower back pain. The backseat passenger, a young child who was unrestrained, is bleeding from the head and appears to be unconscious. You should:

A) ask the driver to step out of the vehicle so you can access the backseat passenger.

B) rapidly extricate the driver so you can gain quick access to the child in the backseat.

C) carefully assess the driver for occult injuries before removing her from the vehicle.

D) apply a vest-type extrication device to the driver and quickly remove her from the car.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

Pages: 1766–1767

Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, pages 1766–1767

110. A 39-year-old man crashed his vehicle into a wooded area and was not found for approximately 8 hours. When you arrive at the scene and assess him, you note that he is conscious but anxious. He is unable to feel or move below his mid-thoracic area and complains of a severe headache. His blood pressure is 210/130 mm Hg, heart rate is 44 beats/min, and respirations are 22 breaths/min. This patient's clinical presentation is MOST consistent with:

A) neurogenic shock.

B) intracranial pressure.

C) autonomic dysreflexia.

D) symptomatic bradycardia.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1773

111. The paramedic should not cover a head-injured patient with a blanket if the ambient temperature is \_\_\_\_ degrees Fahrenheit or higher.

A) 60

B) 70

C) 80

D) 90

Ans: B

Complexity: Moderate

Ahead: General Management of Head Trauma

Subject: Head and Spine Trauma

Page: 1746

Feedback: General Management of Head Trauma, page 1746

112. Medications administered in the prehospital setting for a patient with a head injury would MOST likely be used to:

A) facilitate intubation or terminate seizures.

B) reduce body temperature and promote diuresis.

C) reduce cerebral edema and prevent shivering.

D) prevent cardiac dysrhythmias or increase heart rate.

Ans: A

Complexity: Moderate

Ahead: General Management of Head Trauma

Subject: Head and Spine Trauma

Pages: 1746–1747

Feedback: General Management of Head Trauma, pages 1746–1747

113. If signs of brain herniation are present, the paramedic should maintain an ETCO2 of:

A) 25 to 30 mm Hg.

B) 30 to 35 mm Hg.

C) 35 to 40 mm Hg.

D) 40 to 45 mm Hg

Ans: B

Complexity: Moderate

Ahead: General Management of Head Trauma

Subject: Head and Spine Trauma

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Feedback: General Management of Head Trauma, page 1746

114. General treatment for a 40-year-old patient with a significant head injury and signs of Cushing triad includes:

A) elevating the head 15 to 30 degrees.

B) a 20 mL/kg bolus of normal saline.

C) ventilating at a rate of 30 breaths/min.

D) administering a corticosteroid.

Ans: A

Complexity: Moderate

Ahead: General Management of Head Trauma

Subject: Head and Spine Trauma

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Feedback: General Management of Head Trauma, page 1746

115. A subluxation is defined as:

A) a completely severed spinal cord.

B) a partial or incomplete dislocation.

C) severe distraction injury of the neck.

D) a partially severed spinal cord.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Spinal Injuries

Subject: Head and Spine Trauma

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Feedback: Pathophysiology, Assessment, and Management of Spinal Injuries, page 1748