

## Chapter 26

1. Into what two parts is the nervous system divided?
  - A) sensory and somatic
  - B) sensory and autonomic
  - C) peripheral and somatic
  - D) central and peripheral
  
2. The area of the brain that is located just underneath the cerebrum is the:
  - A) brain stem.
  - B) gray matter.
  - C) spinal ganglion.
  - D) cerebellum.
  
3. Which part of the nervous system controls the body's voluntary movement?
  - A) central
  - B) sensory
  - C) somatic
  - D) autonomic
  
4. Which of the following types of nerves carry information from the body to the brain?
  - A) motor
  - B) central
  - C) sensory
  - D) somatic
  
5. Which part of the nervous system is made up of the brain and spinal cord?
  - A) central
  - B) sensory
  - C) somatic
  - D) autonomic
  
6. The dura mater, pia mater, and arachnoid are layers of tissue that enclose the brain and spinal cord. Together, they are called the:
  - A) meninges.
  - B) spinal cord.
  - C) brain stem.
  - D) motor nerves.

7. The nervous system contains 31 pairs of spinal nerves and 12 pairs of cranial nerves. This is known as the \_\_\_\_\_ nervous system.
- A) central
  - B) somatic
  - C) peripheral
  - D) autonomic
8. Which part of the nervous system is an extension of the brain and is protected by the spinal canal?
- A) meninges
  - B) spinal cord
  - C) brain stem
  - D) motor nerves
9. The largest part of the brain is the:
- A) cranium.
  - B) cerebrum.
  - C) cerebellum.
  - D) foramen magnum.
10. Which of the following are the three major areas of the brain?
- A) frontal, parietal, occipital
  - B) cerebrum, cerebellum, brain stem
  - C) cranium, brain stem, spinal cord
  - D) cranium, skull, foramen magnum
11. Which of the following nerves allow sensory and motor impulses to be sent from one nerve to another?
- A) somatic
  - B) peripheral
  - C) connecting
  - D) autonomic
12. The part of the brain responsible for cardiac, respiratory, and other vital life functions is called the:
- A) cerebrum.
  - B) brain stem.
  - C) cerebellum.
  - D) occipital lobe.

13. Which of the following bones protect the spinal cord?
- A) ribs
  - B) tarsal
  - C) carpal
  - D) vertebrae
14. How many vertebrae protect the spinal cord?
- A) 7
  - B) 12
  - C) 31
  - D) 33
15. The area of the head that contains and protects the brain is called the:
- A) clavicle.
  - B) cranium.
  - C) cerebrum.
  - D) cerebellum.
16. When you suspect a head injury, it is important to look at:
- A) scene safety.
  - B) personal safety.
  - C) the mechanism of injury.
  - D) the mechanism of extraction.
17. Which type of precautions should always be taken first for patients with suspected head injuries?
- A) Splint all extremities.
  - B) Protect the cervical spine.
  - C) Ensure that the patient's pulse rate is at least 120 beats/min.
  - D) Use the head tilt-chin lift maneuver to restore the patient's airway.
18. Which type of trauma describes a "distraction" mechanism of injury?
- A) fall
  - B) hanging
  - C) stabbing
  - D) crushing

19. Injuries of the lower extremities may indicate a problem with what area of the spine?
- A) lumbar
  - B) cervical
  - C) thoracic
  - D) coccygeal
20. Spinal injuries can be difficult to detect. Along with the patient's physical signs and symptoms, you must consider the:
- A) pupil size.
  - B) vital signs.
  - C) initial assessment.
  - D) mechanism of injury.
21. If you already know the mechanism of injury, how could you determine if there is a spinal injury in a responsive patient?
- A) by the extrication methods used
  - B) by the in-line stabilization method used
  - C) through a history and physical exam
  - D) by the patient's ability to answer questions
22. As you assess a responsive patient, you should examine the lower extremities for:
- A) strength.
  - B) priapism.
  - C) distention.
  - D) distraction.
23. Which of the following methods should be used to open the airway of a patient with a suspected spinal injury?
- A) jaw thrust
  - B) chin lift alone
  - C) head tilt alone
  - D) head tilt-chin lift
24. What device should be used to maintain an open airway in an unresponsive patient?
- A) jaw screw
  - B) tongue blade
  - C) oropharyngeal airway
  - D) nasopharyngeal airway

25. After ensuring an open airway in a patient with a spinal injury, your next step should be to:
- A) apply cervical traction.
  - B) apply the head tilt-chin lift maneuver.
  - C) apply in-line cervical stabilization.
  - D) complete a detailed physical exam.
26. A patient with a cervical spine injury may have respiratory failure. What can occur if respiratory assistance is delayed?
- A) death
  - B) paralysis
  - C) kyphosis
  - D) obstruction
27. Once a cervical collar is in place, the collar should support the mandible (lower jaw) and sit on the:
- A) ribs.
  - B) scapula.
  - C) shoulder girdle.
  - D) upper extremities.
28. A cervical collar must NOT prevent the patient or you from:
- A) lateral movement.
  - B) opening the airway.
  - C) rotational movement.
  - D) axial loading of the neck.
29. You arrive on the scene of a rock climbing accident. The patient is found lying against a rock. Your assessment indicates a possible cervical spine injury. Your first action should be to:
- A) apply an Oregon splint.
  - B) apply a cervical immobilization device.
  - C) rotate and secure the patient on a long backboard.
  - D) secure the patient to a Kendrick extrication device.
30. Which of the following statements about providing manual support of the head for a patient with a cervical spine injury is true?
- A) It is not necessary if a cervical collar is used.
  - B) It can be released after a cervical collar is applied.
  - C) It can be released while sizing the cervical collar.
  - D) It must be maintained until the head is secured to a long backboard.

31. You do not have a cervical collar to fit a patient with a possible cervical spine injury. You are also unable to move the head into the in-line position. Your first step should be to:
- A) use IV bags to stabilize the head.
  - B) use sandbags to stabilize the head.
  - C) immobilize the patient in the position found, using a rolled towel and tape to secure the head to a backboard.
  - D) apply any cervical collar, since it is better than no collar.
32. A cervical collar should NOT be used if:
- A) manual stabilization is achieved.
  - B) the in-line position cannot be achieved.
  - C) the patient can keep his or her head still.
  - D) the patient is placed on a Kendrick extrication device.
33. You are called to the lodge where a patient has fallen down some stairs. You find the patient sitting in a chair. A short backboard should be used on this patient because:
- A) only a cervical collar is needed.
  - B) no spinal immobilization is needed.
  - C) it makes it easier to move the patient.
  - D) it is a safeguard against changing a spinal injury into spinal cord damage.
34. After stabilizing the head and applying a cervical collar, the first body part to be secured to the short backboard is the:
- A) head.
  - B) torso.
  - C) legs.
  - D) chin.
35. During extrication, a short backboard should only be used to immobilize a patient who is:
- A) prone.
  - B) sitting.
  - C) supine.
  - D) standing.

36. After a patient is immobilized to a short backboard, your next step is to remove the patient to:
- A) the ground.
  - B) a Stokes basket.
  - C) a long backboard.
  - D) an ambulance stretcher.
37. Despite the lack of obvious signs and symptoms, whenever there is any possibility of spinal injury, you should:
- A) apply traction splinting.
  - B) apply a cardiac monitor.
  - C) apply rigid immobilization.
  - D) perform rapid extrication.
38. Which device is used to immobilize patients found in a lying, standing, or sitting position?
- A) Oregon splint
  - B) long backboard
  - C) short backboard
  - D) Kendrick extrication device
39. When securing the patient on a long backboard, you should:
- A) remove the short backboard first.
  - B) immobilize from head to foot.
  - C) immobilize the head before the torso.
  - D) immobilize the torso before the head.
40. Face cages on sports helmets are attached with clips or straps. They can be removed quickly by:
- A) lifting.
  - B) cutting or removing.
  - C) pulling.
  - D) stretching.

41. You arrive on the scene of a snowmobile crash. The patient has point tenderness from the fifth to the seventh cervical vertebrae but is able to move all extremities. The patient has a pulse of 92 beats/min and normal respirations of 16 breaths/min. The patient is wearing an open-face helmet. Cervical immobilization would include:
- A) cutting the helmet off at the scene.
  - B) removing the helmet before immobilization.
  - C) applying a cervical collar before removal of the helmet.
  - D) leaving the helmet in place and securing the patient to a backboard.
42. Which of the following is an appropriate reason for removing a helmet at the scene?
- A) The patient has point tenderness at the site of injury.
  - B) Proper spinal immobilization is difficult but possible.
  - C) There is good fit with little movement inside the helmet.
  - D) It is difficult to maintain an open airway with the helmet in place.
43. For a helmet to remain on a patient it must NOT prevent access to the patient's:
- A) eyes.
  - B) airway.
  - C) carotid pulse.
  - D) posterior neck.
44. Regardless of the type of helmet, helmet removal should be done with at least how many rescuers?
- A) 1
  - B) 2
  - C) 3
  - D) 4
45. In maintaining stabilization of the cervical spine during helmet removal, the stabilizing rescuer's hands should be placed in which of the following ways?
- A) one on the patient's lower jaw at the angle of the jaw, and the other behind the head at the junction of the head and cervical spine
  - B) one on the patient's chin and the other on the patient's forehead
  - C) one on the patient's chin and the other behind the patient's neck
  - D) one on the angle of the patient's lower jaw and the other at the junction of the head and cervical spine

46. When you are immobilizing a child to a long backboard, you should place padding under the child's:
- A) head.
  - B) neck.
  - C) shoulders.
  - D) low back and buttocks.
47. What area is secured last when you are placing a patient on a long backboard?
- A) legs
  - B) chest
  - C) waist
  - D) head
48. Bleeding might be more profuse than expected with injuries to the:
- A) nose.
  - B) chest.
  - C) scalp.
  - D) forearm.
49. Signs and symptoms of a brain injury include:
- A) scalp laceration.
  - B) low blood pressure.
  - C) blood from the mouth.
  - D) clear fluid from the ears and nose.
50. The best indicator of brain injury is:
- A) low blood pressure.
  - B) an increasing pulse rate.
  - C) a regular breathing pattern.
  - D) an altered or decreasing mental status.
51. Which of the following statements about the protective coverings of the nervous system is true?
- A) The dura mater is the innermost layer of the meninges.
  - B) Cerebrospinal fluid is found between the skull and the dura mater.
  - C) The blood vessels that nourish the brain lie in the arachnoid and the pia mater.
  - D) The arachnoid is the outermost layer of the meninges.

52. A construction worker has been hit in the head by a steel girder that was being placed by a crane. The man is unconscious and has a large scalp laceration on the left side of his head, starting just above his ear. The best way to ensure that the worker has an adequate airway is to:
- A) use the jaw-thrust maneuver.
  - B) use a head tilt-chin lift maneuver.
  - C) give oxygen via a nasal cannula.
  - D) place the patient in a head-down position.
53. Prehospital care for a large scalp avulsion should include:
- A) applying a Vaseline gauze dressing.
  - B) irrigating with sterile saline solution.
  - C) applying direct pressure at the skin bridge.
  - D) replacing the flap in its bed and applying a dry, sterile, compression dressing over it.
54. If you observe bleeding from a scalp laceration, you should:
- A) pack the wound with cotton balls.
  - B) cover the wound with sterile aluminum foil.
  - C) apply direct pressure with a dry sterile dressing.
  - D) pack the injured side of the head with ice to reduce swelling.
55. The most reliable evaluation you can make while assessing a head injury is to observe and record the patient's:
- A) pulse rate.
  - B) blood pressure.
  - C) pupillary response.
  - D) level of responsiveness.
56. The first step in restoring the airway of an unresponsive patient with a suspected spinal injury is to:
- A) use a jaw-thrust maneuver while maintaining in-line spinal immobilization.
  - B) apply a simple face mask to provide more oxygen.
  - C) insert an oropharyngeal airway.
  - D) apply gentle traction (approximately 10 lB) and realign the head in the eyes-forward position.

57. A woman is believed to have a spinal injury after a skiing accident in which she was wearing a helmet. Which of the following statements about care of this patient is true?
- A) The helmet should be left in place if it appears loose enough for one rescuer to remove.
  - B) The only reason to remove the helmet in the field is to establish an adequate airway.
  - C) If airway maintenance is possible with a snug-fitting helmet in place, the helmet should be left on the patient and taped to the backboard.
  - D) Chin straps should be left in place to maintain proper alignment of the helmet on the patient's head.
58. You have started caring for a patient who is still sitting in his vehicle after an automobile crash. The patient has pain in his upper back and tingling in his fingers and toes. You should:
- A) secure the patient's trunk to a short backboard before fixing his head to the device.
  - B) insert an oropharyngeal airway.
  - C) extricate the patient directly onto a long backboard.
  - D) securely tape the patient's chin and forehead to the backboard before moving him.
59. Your first step in assessing whether a patient has a possible spinal injury is to:
- A) ask the patient to wiggle the toes and fingers.
  - B) question the patient about what happened and what hurts.
  - C) palpate the spine for deformity or tenderness.
  - D) examine the face and neck for contusions.
60. The most important observation you can make and record in a patient with a head injury is any change in the:
- A) respiratory rate and pattern.
  - B) level of responsiveness.
  - C) blood pressure and pulse rate.
  - D) neurologic status of the extremities.
61. A man who has fallen from the chairlift is lying in a supine position in the snow. He requires immobilization on a long backboard. You should:
- A) place a large pad behind his back.
  - B) log roll the patient toward the board and place him in a prone position.
  - C) secure the patient's trunk to the board before his head and neck.
  - D) assign the person located at the foot of the patient to coordinate the logrolling activity.

62. When preparing a patient with a spinal injury for removal from a vehicle, you should first:
- A) center the patient on a backboard.
  - B) check pulse, motor functions, and sensory functions.
  - C) apply a cervical collar.
  - D) obtain vital signs.
63. After performing a rapid extrication and securing a patient to a backboard, it is important to:
- A) reassess vital signs.
  - B) check pulse, motor functions, and sensory functions.
  - C) apply a cervical collar.
  - D) contact medical control.
64. A temporary loss of brain function due to injury describes a:
- A) contusion.
  - B) concussion.
  - C) cerebral infarct.
  - D) subdural.
65. A permanent loss of brain function due to an injury describes a:
- A) concussion.
  - B) contusion.
  - C) epidural.
  - D) cerebral episode.
66. Intracranial bleeding that occurs in the brain tissues is called:
- A) subdural
  - B) epidural
  - C) subarachnoid
  - D) intracerebral
67. Bleeding outside the dura and under the skull is called:
- A) epidural
  - B) subdural
  - C) parenchymal
  - D) subarachnoid

68. The "shock absorber" for the brain is the:
- A) blood in the intracranial vessels.
  - B) cerebrospinal fluid.
  - C) dura mater fluid.
  - D) cranial fossa.
69. Which is the only moveable facial bone?
- A) maxilla
  - B) mandible
  - C) temporal
  - D) frontal
70. The vertebrae are separated by cushions called:
- A) bony arches
  - B) vertebral bodies
  - C) spinous processes
  - D) intervertebral disks
71. For an unresponsive, spinal-injured patient, you should do the following except:
- A) maintain the spinal integrity by rolling the patient into a supine position.
  - B) gently align the head into a neutral, forward-facing position
  - C) if needed, open the airway using the head-tilt, chin-lift method
  - D) suction the airway if needed and consider inserting an oropharyngeal airway
72. You should stop attempting to place the head into a neutral, in-line position if the patient complains of any of the following except:
- A) muscle spasms in the neck
  - B) increased pain with movement
  - C) numbness, tingling, or weakness
  - D) photosensitivity in the eyes
73. When assessing your patient with a focused physical exam, you inspect the spinal column for DCAP-BTLS. The P in DCAP stands for:
- A) pain
  - B) pressure
  - C) puncture/penetrations
  - D) posture

74. You should immobilize all suspected spinal injuries in:
- A) traction splints.
  - B) the prone position.
  - C) the position of deformity.
  - D) the neutral in-line position.

## Answer Key

1. D
2. D
3. C
4. C
5. A
6. A
7. C
8. B
9. B
10. B
11. C
12. B
13. D
14. D
15. B
16. C
17. B
18. B
19. A
20. D
21. C
22. A
23. A
24. C
25. C
26. A
27. C
28. B
29. B
30. D
31. C
32. B
33. D
34. B
35. B
36. C
37. C
38. B
39. D
40. B
41. D
42. D
43. B
44. B

- 45. D
- 46. C
- 47. D
- 48. C
- 49. D
- 50. D
- 51. C
- 52. A
- 53. D
- 54. C
- 55. D
- 56. A
- 57. C
- 58. A
- 59. B
- 60. B
- 61. C
- 62. B
- 63. B
- 64. B
- 65. B
- 66. D
- 67. A
- 68. B
- 69. B
- 70. D
- 71. C
- 72. D
- 73. C
- 74. D