

STUDY GUIDE
for
Musculoskeletal Injuries, Soft-tissue Injuries, and Burns

1. Which of the following is **not** part of the axial skeleton?
 - A. skull
 - B. pelvis
 - C. vertebral column
 - D. thorax

2. Match the following components of long bones with their definitions:

<p>_____ Diaphysis</p> <p>_____ Epiphysis</p> <p>_____ Metaphysis</p> <p>_____ Periosteum</p> <p>_____ Haversian canals</p>	<p>A. Intermediate transition region</p> <p>B. Passages for blood vessels and nerves</p> <p>C. The wide end of a long bone</p> <p>D. Long cylindrical shaft</p> <p>E. Tough outer bone layer</p>
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3. Connective tissue that provides the articular surfaces of the skeletal systems is called
 - A. cartilage
 - B. synovium
 - C. ligament
 - D. fossa

4. Connective tissues bands which hold joints together are called
 - A. fossa
 - B. ligaments
 - C. cartilage
 - D. synovium

5. The oily, viscus fluid that lubricates articular surfaces is known as
 - A. fossa
 - B. ligaments
 - C. cartilage
 - D. synovium

6. The most commonly fractured bone in the human body is the
- A. scapula
 - B. humerus
 - C. femur
 - D. clavicle
7. The proximal humerus articulates with the
- A. radius
 - B. ulna
 - C. glenoid fossa
 - D. clavicle
8. The act of turning the palm or foot upward is called
- A. pronation
 - B. abduction
 - C. adduction
 - D. supination
9. The metacarpal bones articulate with the
- A. radius
 - B. ulna
 - C. phalanges
 - D. all of the above
10. The hollow surface of the pelvis into which the head of the femur fits is the
- A. glenoid fossa
 - B. calcaneus
 - C. acetabulum
 - D. tibial plateau
11. The distal femur articulate with the
- A. pelvis
 - B. tibia
 - C. fibula
 - D. radius

12. The medial malleolus is formed by the
- A. tibia
 - B. fibula
 - C. calcaneus
 - D. tarsal bones
13. _____ is the only muscle over which we have control
- A. Cardiac muscle
 - B. Smooth muscle
 - C. Skeletal muscle
 - D. None of the above
14. The Achilles is an example of a
- A. ligament
 - B. tendon
 - C. cartilage
 - D. long bone
15. Blunt trauma causing bleeding and discoloration underneath the skin is a
- A. laceration
 - B. contusion
 - C. abrasion
 - D. subluxation
16. Overstretching of a muscle is called a
- A. strain
 - B. sprain
 - C. subluxation
 - D. dislocation
17. Tearing of a ligament is known as a/an
- A. strain
 - B. sprain
 - C. abduction
 - D. adduction

18. A partial separation of a joint is called a/an
- A. dislocation
 - B. subluxation
 - C. pronation
 - D. insufflation
19. Match the following fractures with their respective definitions:
- | | |
|------------------|---|
| _____ Hairline | A. Partial break on one side of bone only |
| _____ Comminuted | B. Bone ends compress together |
| _____ Impacted | C. Small crack in the bone |
| _____ Greenstick | D. Bone ends fragmented |
| _____ Oblique | E. Diagonal break |
20. A transverse fracture is one in which the fracture extends perpendicular across from the long axis of the bone.
- A. True
 - B. False
21. Often you may not be able to differentiate a proximal femur fracture from a/an
- A. posterior hip dislocation
 - B. anterior hip dislocation
 - C. pelvic fracture
 - D. acetabulum fracture
22. Colle's fracture involves which bone(s)?
- A. Proximal ulna
 - B. Proximal radius
 - C. Distal radius
 - D. Distal ulna
23. Which of the following statements is true regarding the management of musculoskeletal injuries?
- A. Splint the joints above and below the fracture site.
 - B. Splint the bones above and below a dislocated joint.
 - C. Perform distal neurovascular tests before and after any splinting.
 - D. All of the above

24. The management of a pelvic fracture includes which of the following procedures?
- A. Pneumatic antishock garment
 - B. IV fluid replacement
 - C. Immobilization of the pelvic ring
 - D. All of the above
25. Traction splinting is indicated in which of the following conditions?
- A. Isolated midshaft femur fracture
 - B. Disease-induced proximal femur fracture
 - C. Bilateral femur fractures with profound shock
 - D. All of the above
26. When should you attempt to manipulate a knee dislocation?
- A. Always
 - B. Never
 - C. if distal pulses are absent
 - D. if the patient experiences pain
27. In which of the following cases would the pneumatic antishock garment be an effective splint?
- A. Pelvic fracture
 - B. Bilateral femur fractures
 - C. Multiple Tibia/fibula fracture s with shock
 - D. All of the above
28. The outermost layer of the skin consisting of dead or dying cells is the
- A. epidermis
 - B. dermis
 - C. subcutaneous layer
 - D. sebaceous layer
29. Fatty secretion that helps keep the skin pliable and waterproof is called
- A. intima
 - B. cilia
 - C. mucus
 - D. sebum

30. The skin layer containing blood vessels and nerves is the
- A. epidermis
 - B. dermis
 - C. subcutaneous layer
 - D. sebaceous layer
31. The layer containing adipose fat and connective tissue is the
- A. epidermis
 - B. dermis
 - C. subcutaneous layer
 - D. sebaceous layer
32. The smooth interior layer of the blood vessels is the tunica
- A. intima
 - B. media
 - C. adventitia
 - D. lumina
33. The middle, muscular layer of the blood vessels is the tunica
- A. intima
 - B. media
 - C. adventitia
 - D. lumina
34. The outer fibrous layer of the blood vessels is the tunica
- A. intima
 - B. media
 - C. adventitia
 - D. lumina
35. The functions of the skin include
- A. protecting the body from environmental pathogens
 - B. providing a barrier against infection
 - C. perceiving temperature, pain and pressure
 - D. all of the above

36. A closed wound in which the skin is unbroken, but the tissue underneath is damaged is a/an
- A. abrasion
 - B. concussion
 - C. contusion
 - D. amputation
37. General reddening of the skin due to dilation of the superficial capillaries is
- A. ecchymosis
 - B. erythema
 - C. hyphema
 - D. contusion
38. A scraping away of the superficial layers of the skin is a/an
- A. erythema
 - B. ecchymosis
 - C. contusion
 - D. abrasion
39. A collection of blood trapped within a body compartment is a/an
- A. hyphema
 - B. erythema
 - C. hematoma
 - D. contusion
40. Black and blue discoloration of the skin due to leakage of blood into the tissues is
- A. hyphema
 - B. Hemoptysis
 - C. erythema
 - D. contusion or ecchymosis
41. The extent of burn injury depends upon which of the following factors?
- A. Temperature
 - B. Concentration of heat energy
 - C. Length of contact time
 - D. All of the above

42. Which of the following types of radiation emits the most powerful rays
- A. Alpha
 - B. Beta
 - C. Delta
 - D. Gamma
43. The extent of radiation depends on which of the following factors?
- A. Duration of exposure
 - B. Distance from the source
 - C. Shielding from the source
 - D. All of the above
44. Your patient who presents with dyspnea and hoarseness, following the inhalation of superheated steam is in danger of developing
- A. pulmonary embolism
 - B. complete airway obstruction
 - C. anaphylaxis
 - D. pulmonary edema
45. Any patient who has been in an enclosed area during combustion should be suspected of having
- A. pulmonary embolism
 - B. pulmonary edema
 - C. carbon monoxide poisoning
 - D. hyponatremia
46. A burn involving the epidermis and dermis, producing blisters and pain in classified as
- A. first degree
 - B. second degree
 - C. third degree
 - D. fourth degree
47. An adult with burns to both arms, chest, abdomen, and entire back has a % BSA burn.
- A. 36
 - B. 45
 - C. 54
 - D. 63

48. A child with burns to both legs has a % BSA burn.
- A. 9
 - B. 14
 - C. 18
 - D. 28
49. Which of the following is a complication of a burn injury?
- A. Hypothermia
 - B. Hypovolemia
 - C. Eschar
 - D. All of the above
50. The major complication of circumferential burns is the
- A. fluid loss in the burn area
 - B. loss of barrier against infection
 - C. tourniquet effect cutting off distal circulation
 - D. anaerobic metabolism proximal to the burn site
51. The proper care for an amputated part includes placing the part
- A. directly on ice
 - B. in warm saline
 - C. in a sealed dry bag, then into cold water
 - D. directly into cold water
52. What percentage of partial thickness burns can be safely cooled with water?
- A. 10%
 - B. 20%
 - C. 25%
 - D. 50%
53. Standard management of chemical burns includes
- A. rinsing the area with ice water
 - B. using a neutralizing agent
 - C. leaving any corrosive materials on the skin
 - D. vigorous irrigation with cool water
54. Which of the following substances can you safely irrigate?
- A. Sodium
 - B. Phenol
 - C. Lye
 - D. Dry lime

55. The appendicular skeleton includes all of the following, except
- A. the clavicles and scapulae.
 - B. the arms, forearms, wrists, hands and fingers.
 - C. the legs, ankles, feet, and toes.
 - D. the sacrum and coccyx.
 - E. the pelvic bones.
56. Red blood cell production occurs in the
- A. yellow bone marrow.
 - B. aponeurosis.
 - C. red bone marrow.
 - D. metaphysis.
 - E. periosteum.
57. Fat storage is accomplished within the
- A. yellow bone marrow.
 - B. aponeurosis.
 - C. red bone marrow.
 - D. metaphysis.
 - E. periosteum.
58. Initiation of new bone formation is accomplished by the
- A. yellow bone marrow.
 - B. aponeurosis.
 - C. red bone marrow.
 - D. metaphysis.
 - E. periosteum.
59. In layman's terms, the _____ is called the shoulder blade.
- A. ulna
 - B. clavicle
 - C. humerus
 - D. radius
 - E. scapula
60. The bone located on the lateral side of the forearm is the
- A. ulna
 - B. clavicle
 - C. humerus
 - D. radius
 - E. scapula

61. The _____ is the bone of the upper arm.
- A. ulna
 - B. clavicle
 - C. humerus
 - D. radius
 - E. scapula
62. The _____ are the bones of the hand.
- A. tarsals
 - B. metatarsals
 - C. carpals
 - D. metacarpals
 - E. phalanges
63. The _____ are the bones of the fingers.
- A. tarsals
 - B. metatarsals
 - C. carpals
 - D. metacarpals
 - E. phalanges
64. The _____ are the bones of the ankle.
- A. tarsals
 - B. metatarsals
 - C. carpals
 - D. metacarpals
 - E. phalanges
65. The _____ are the bones of the foot.
- A. tarsals
 - B. metatarsals
 - C. carpals
 - D. metacarpals
 - E. phalanges
66. The _____ are the bones of the toes.
- A. tarsals
 - B. metatarsals
 - C. carpals
 - D. metacarpals
 - E. phalanges

67. Each of the large winglike bones of the pelvis is called
- A. an ischium.
 - B. an ilium.
 - C. an iliac crest.
 - D. a sacrum.
 - E. a pubic bone.
68. The most superior aspect of either side of the pelvis is the
- A. ischium.
 - B. ilium.
 - C. iliac crest.
 - D. sacrum.
 - E. pubic bone.
69. The most inferior portion of either side of the pelvis is the
- A. ischium.
 - B. ilium.
 - C. iliac crest.
 - D. sacrum.
 - E. pubic bone.
70. The posterior segment of the pelvis consists of the
- A. ischium.
 - B. ilium.
 - C. iliac crest.
 - D. sacrum.
 - E. pubic bone.
71. The anterior portion of the pelvis is formed by the meeting of two
- A. ischiums.
 - B. iliums.
 - C. iliac crests.
 - D. sacrums.
 - E. pubic bones.
72. Which of the following statements regarding fractures is false?
- A. A fracture does not require trauma to occur.
 - B. A fracture does not always produce significant pain.
 - C. A fracture may be present without a change in the extremity's range of motion, sensation, circulation, or appearance.
 - D. All of the above are false.
 - E. None of the above is false.

73. Complications of an extremity fracture include all of the following, except
- A. pinched or severed nerves
 - B. soft tissue damage
 - C. pinched or lacerated blood vessels
 - D. contaminated wounds.
 - E. hemiparesis
74. _____ may cause the leg to appear shortened.
- A. An anterior hip dislocation
 - B. A posterior hip dislocation
 - C. A hip fracture
 - D. Either answer A or C
 - E. Answer A, B, or C
75. _____ usually causes an anterior bulge and lateral rotation of the leg.
- A. An anterior hip dislocation
 - B. A posterior hip dislocation
 - C. A hip fracture
 - D. Either answer A or C
 - E. Answer A, B, or C
76. _____ usually causes an anterior sunken area and medial rotation of the leg.
- A. An anterior hip dislocation
 - B. A posterior hip dislocation
 - C. A hip fracture
 - D. Either answer A or C
 - E. Answer A, B, or C
77. Your patient presents with her arm extended above her head and she is unable to move it at the shoulder. She most likely has of her shoulder.
- A. an anterior dislocation
 - B. a posterior dislocation
 - C. an inferior dislocation
 - D. a superior dislocation
 - E. None of the above.
78. Your patient presents with a hollow shoulder, his arm hanging forward and away from his body, and his elbow medially rotated. He most likely has of his shoulder.
- A. an anterior dislocation
 - B. a posterior dislocation
 - C. an inferior dislocation
 - D. a superior dislocation
 - E. None of the above.

79. Your patient holds his arm close to his anterior chest and appears to have a bulge on his anterior shoulder. He most likely has of his shoulder.
- A. an anterior dislocation
 - B. a posterior dislocation
 - C. an inferior dislocation
 - D. a superior dislocation
 - E. None of the above.
80. The pulse that can be found at the posterior area of the knee is called the _____ pulse.
- A. popliteal
 - B. dorsalis pedis
 - C. posterior fibial
 - D. medial tibial
 - E. posterior tibial
81. The pulse that can be found on the medial side of the ankle, just posterior and inferior to the “ankle bone”, is called the
- A. popliteal
 - B. dorsalis pedis
 - C. posterior fibial
 - D. medial tibial
 - E. posterior tibial
82. Which of the following statements regarding fracture splinting is false?
- A. Use gentle traction to straighten an angulated fracture before splinting, unless significant pain or resistance to correction is encountered.
 - B. Splint dislocations or deformities near a joint in the position they are found (manipulate them once only in attempt to restore a distal pulse).
 - C. Immobilization of the fracture is not accomplished unless it is immobilized from the joint above to the joint below the fracture.
 - D. A fractured long bone may be gently tractioned until protruding bone ends are drawn back into place.
 - E. Pad all rigid splints to prevent pressure and discomfort.

83. General rules for the splinting of any fracture include all of the following, except
- A. expose the injury and check for a distal pulse.
 - B. remove all jewelry from the injured limb and secure it on the patient's person.
 - C. gently move the deformed section to check for the presence of crepitus.
 - D. dress the wound and pad all rigid splints before splinting.
 - E. always leave fingers and toes exposed unless they are injured and require dressing.
84. Which of the following statements regarding pelvic fracture is false?
- A. Pelvic fractures present a potential life-threat.
 - B. Apply and inflate the abdominal section of the PASG to stabilize a pelvic fracture (the legs should remain uninflated unless associated extremity injury or hypotension is present).
 - C. Two or more large-bore crystalloid IVs should be initiated regardless of apparently "stable" vital signs in the presence of suspected pelvic fracture.
 - D. Consider rapid transport to a trauma facility.
 - E. None of the above is false.
85. Which of the following statements regarding upper extremity immobilization is false?
- A. A sling and swathe are required on all upper extremity injuries (except for isolated digital injury).
 - B. Place a roll of bandage in the hand of the injured extremity to preserve the position of function.
 - C. Use of air splints requires monitoring to assess for leaks or pressure changes.
 - D. Rigid splints may be used in conjunction with a sling and swathe.
 - E. An injured finger may be splinted with a tongue depressor or taped to the adjacent finger.
86. "Goose egg" is a term commonly used by nonmedical personnel to indicate the presence of
- A. a hematoma
 - B. a laceration
 - C. an abrasion
 - D. an incision
 - E. a contusion

87. The term eschar refers to
- A. the scabs that form on healing wounds or burns.
 - B. inelastic, necrotic tissue formation in the area of a full thickness burn.
 - C. formation of blisters associated with a third degree burn.
 - D. Any of the above
 - E. None of the above
88. A crushing amputation frequently will result in
- A. Profuse bleeding that is difficult to control
 - B. minimal bleeding because of rapid clotting
 - C. minimal bleeding because of vascular muscle contraction, producing tamponade
 - D. profuse bleeding because of muscular contraction
 - E. none of the above
89. An amputation made with a single blow from a very sharp instrument or object frequently will result in
- A. profuse bleeding that is difficult to control
 - B. minimal bleeding because of rapid clotting
 - C. minimal bleeding because of vascular muscle contraction, producing tamponade
 - D. profuse bleeding because of muscular contraction
 - E. none of the above
90. Severe pain may be associated with all areas of
- A. a first-degree burn
 - B. a second-degree burn
 - C. a third-degree burn
 - D. both answers a and b
 - E. both answers b and c
91. Charred black and/or dried white areas are associated with
- A. a first-degree burn
 - B. a second-degree burn
 - C. a third-degree burn
 - D. both answers a and b
 - E. both answers b and c

92. Which of the following statements regarding electrical burn injury is false?
- A. electrical current causes thermal burns within the body tissues, extending from contact sites to exit sites.
 - B. Electrical current may immobilize respiratory muscles and produce respiratory arrest.
 - C. Electrical current may produce flash burns or ignite articles of clothing and produce exterior thermal burns as well as internal electrical burns.
 - D. Electrical current may produce ventricular fibrillation.
 - E. Electrical current follows pathways of muscle or bone fibers more readily than pathways of blood vessels or nerves.