

Chapter 29

Review

1. Skeletal muscle is also referred to as:
 - A. smooth muscle.
 - B. striated muscle.
 - C. autonomic muscle.
 - D. involuntary muscle.

Answer: B

Rationale: Skeletal muscle, also called striated muscle because of its characteristic stripes (striations), attaches to the bones and usually crosses at least one joint, forming the major muscle mass of the body. This type of muscle is also called voluntary muscle because it is under direct voluntary control of the brain.

1. Skeletal muscle is also referred to as:

A. smooth muscle.

Rationale: This is found in the walls of most tubular structures, internal organs, and the cardiovascular system.

B. striated muscle.

Rationale: Correct answer

1. Skeletal muscle is also referred to as:

C. autonomic muscle.

Rationale: This is not a term associated with the muscles.

D. involuntary muscle.

Rationale: Involuntary muscle is also called smooth muscle. It is not under voluntary control of the brain.

2. You respond to a soccer game for a 16-year-old male with severe ankle pain. When you deliver him to the hospital, the physician tells you that he suspects a sprain. This means that:
- A. there is a disruption of the joint and the bone ends are no longer in contact.
 - B. the patient has an incomplete fracture that passes only partway through the bone.
 - C. stretching or tearing of the ligaments with partial or temporary dislocation of the bone ends has occurred.
 - D. the muscles of the ankle have been severely stretched, resulting in displacement of the bones from the joint.

Answer: C

Rationale: A sprain is a joint injury in which there is both partial or temporary dislocation of the bone ends and partial stretching or tearing of the supporting ligaments. Sprains are typically marked by swelling, pain, and ecchymosis.

2. You respond to a soccer game for a 16-year-old male with severe ankle pain. When you deliver him to the hospital, the physician tells you that he suspects a sprain. This means that:

A. there is a disruption of the joint and the bone ends are no longer in contact.

Rationale: With a sprain, there will be a partial or temporary dislocation of the bone ends.

B. the patient has an incomplete fracture that passes only partway through the bone.

Rationale: With a sprain, there is no fracture associated with the injury.

2. You respond to a soccer game for a 16-year-old male with severe ankle pain. When you deliver him to the hospital, the physician tells you that he suspects a sprain. This means that:

C. stretching or tearing of the ligaments with partial or temporary dislocation of the bone ends has occurred.

Rationale: Correct answer

D. the muscles of the ankle have been severely stretched, resulting in displacement of the bones from the joint.

Rationale: A sprain is not an injury to the muscles.

3. A young male has a musculoskeletal injury and is unresponsive. You will NOT be able to assess:

A. false motion.

B. distal pulses.

C. capillary refill.

D. sensory and motor functions.

Answer: D

Rationale: In order to assess sensory and motor functions (eg, Can you feel? Can you move?), the patient must be conscious, alert, and able to follow commands. False motion, distal pulses, and capillary refill are objective findings; therefore, they can be assessed in unresponsive patients.

3. A young male has a musculoskeletal injury and is unresponsive. You will NOT be able to assess:

A. false motion.

Rationale: This is an objective finding.

B. distal pulses.

Rationale: This is an objective finding.

C. capillary refill.

Rationale: This is an objective finding.

D. sensory and motor functions.

Rationale: Correct answer

4. The purpose of splinting a fracture is to:
- A. reduce the fracture if possible.
 - B. prevent motion of bony fragments.
 - C. reduce swelling in adjacent soft tissues.
 - D. force the bony fragments back into anatomic alignment.

Answer: B

Rationale: The purpose of splinting a fracture is to prevent motion of the bony fragments, thus minimizing the possibility of neurovascular damage. Splinting is not intended to force bony fragments into anatomic alignment, nor will it reduce swelling (ice reduces swelling). You should never try to reduce a fracture.

4. The purpose of splinting a fracture is to:

A. reduce the fracture if possible.

Rationale: Reduction of a suspected fracture is a medical procedure to be performed in the hospital.

B. prevent motion of bony fragments.

Rationale: Correct answer

4. The purpose of splinting a fracture is to:

C. reduce swelling in adjacent soft tissues.

Rationale: Splinting will not reduce swelling, but cold application will.

D. force the bony fragments back into anatomic alignment.

Rationale: Splinting to immobilize a fracture site is not intended to force bony fragments back into alignment.

5. A motorcyclist crashed his bike and has closed deformities to both of his midshaft femurs. He is conscious, but restless; his skin is cool and clammy; and his radial pulses are rapid and weak. The MOST appropriate splinting technique for this patient involves:
- A. applying rigid board splints.
 - B. applying two traction splints.
 - C. securing him to a long backboard.
 - D. immobilizing his femurs with air splints.

Answer: C

Rationale: In this particular case, it is more practical—and less time-consuming—to secure the patient to a long backboard. He is in shock and requires rapid transport. Taking the time to apply traction splints, air splints, or board splints will only delay transport.

5. A motorcyclist crashed his bike and has closed deformities to both of his midshaft femurs. He is conscious, but restless; his skin is cool and clammy; and his radial pulses are rapid and weak. The MOST appropriate splinting technique for this patient involves:

A. applying rigid board splints.

Rationale: This causes undue delays in the transport of the patient.

B. applying two traction splints.

Rationale: This causes undue delays in the transport of the patient.

5. A motorcyclist crashed his bike and has closed deformities to both of his midshaft femurs. He is conscious, but restless; his skin is cool and clammy; and his radial pulses are rapid and weak. The MOST appropriate splinting technique for this patient involves:

C. securing him to a long backboard.

Rationale: Correct answer

D. immobilizing his femurs with air splints.

Rationale: This causes undue delays in the transport of the patient.

6. To effectively immobilize a fractured clavicle, you should apply a(n):
- A. sling and swathe.
 - B. air splint over the entire arm.
 - C. rigid splint to the upper arm, then a sling.
 - D. traction splint to the arm of the injured side.

Answer: A

Rationale: The quickest and most effective way to immobilize a fractured clavicle (collarbone) is to apply a sling and swathe. The sling will help minimize movement of the clavicle itself, while the swath will minimize movement of the arm on the affected side.

6. To effectively immobilize a fractured clavicle, you should apply a(n):

A. sling and swathe.

Rationale: Correct answer

B. air splint over the entire arm.

Rationale: An air splint is not effective on a joint.

6. To effectively immobilize a fractured clavicle, you should apply a(n):

C. rigid splint to the upper arm, then a sling.

Rationale: A sling will not prevent the movement of the shoulder.

D. traction splint to the arm of the injured side.

Rationale: There is no traction splint for the arm.

7. A patient tripped, fell, and landed on her elbow. She is in severe pain and has obvious deformity to her elbow. You should:
- A. assess distal pulses.
 - B. manually stabilize her injury.
 - C. assess her elbow for crepitus.
 - D. apply rigid board splints to her arm.

Answer: B

Rationale: When caring for a patient with an orthopaedic injury, you should *first* manually stabilize the injury site; this will prevent further injury. Then assess pulse, motor functions, and sensory functions distal to the injury. Splint the injury using the appropriate technique, and then reassess pulse, motor functions, and sensory functions. Do not intentionally assess for crepitus; this is a coincidental finding that you may encounter during your assessment and *should not be elicited*.

7. A patient tripped, fell, and landed on her elbow. She is in severe pain and has obvious deformity to her elbow. You should:

A. assess distal pulses.

Rationale: This is completed after the manual stabilization of the injury.

B. manually stabilize her injury.

Rationale: Correct answer

7. A patient tripped, fell, and landed on her elbow. She is in severe pain and has obvious deformity to her elbow. You should:

C. assess her elbow for crepitus.

Rationale: Do not intentionally assess for crepitus; this is a coincidental finding.

D. apply rigid board splints to her arm.

Rationale: This is completed after manual stabilization of the injury.

8. When treating an open extremity fracture, you should:
- A. apply a splint and then dress the wound.
 - B. dress the wound before applying a splint.
 - C. irrigate the wound before applying a dressing.
 - D. allow the material that secures the splint to serve as the dressing.

Answer: B

Rationale: Prior to splinting an open extremity fracture, you should cover the wound with a dry, sterile dressing. This will help control any bleeding and decreases the risk of infection. Irrigating an open fracture should be avoided in the field; this also increases the risk of infection—especially if foreign material is flushed into the wound.

8. When treating an open extremity fracture, you should:

A. apply a splint and then dress the wound.

Rationale: The dressing must come before the splint.

B. dress the wound before applying a splint.

Rationale: Correct answer

8. When treating an open extremity fracture, you should:

C. irrigate the wound before applying a dressing.

Rationale: Irrigation of an open fracture in the prehospital setting may increase the chance of infection.

D. allow the material that secures the splint to serve as the dressing.

Rationale: The wound must be dressed separately from the splint and before splinting is done.

9. Which of the following musculoskeletal injuries has the GREATEST risk for shock due to blood loss?

- A. pelvic fracture
- B. posterior hip dislocation
- C. unilateral femur fracture
- D. proximal humerus fracture

Answer: A

Rationale: The pelvic cavity can accommodate a large volume of blood. Shock in a patient with a pelvic injury is usually due to injury to femoral veins or arteries. Bilateral femur fractures can also cause severe blood loss (up to 1 liter per femur).

9. Which of the following musculoskeletal injuries has the GREATEST risk for shock due to blood loss?

A. Pelvic fracture

Rationale: Correct answer

B. Posterior hip dislocation

Rationale: Unless the dislocation has injured the vascular system, bleeding will be contained and minimal.

9. Which of the following musculoskeletal injuries has the GREATEST risk for shock due to blood loss?

C. Unilateral femur fracture

Rationale: A unilateral femur fracture can lose 500 to 1,500 mL of blood.

D. Proximal humerus fracture

Rationale: Nerves and blood vessels can be injured, and the blood loss could be 500 mL.

10. A patient injured her knee while riding a bicycle. She is lying on the ground, has her left leg flexed, is in severe pain, and cannot move her leg. Your assessment reveals obvious deformity to her left knee. Distal pulses are present and strong. The MOST appropriate treatment for her injury involves:
- A. wrapping her entire knee area with a pillow.
 - B. splinting the leg in the position in which it was found.
 - C. straightening her leg and applying two rigid board splints.
 - D. straightening her leg and applying and inflating an air splint.

Answer: B

Rationale: The patient likely has a dislocated knee. You should immobilize any joint injury in the position in which it was found—especially if distal pulses are present and strong. Attempting to straighten a dislocated joint may cause damage to the nerves and/or vasculature.

10. A patient injured her knee while riding a bicycle. She is lying on the ground, has her left leg flexed, is in severe pain, and cannot move her leg. Your assessment reveals obvious deformity to her left knee. Distal pulses are present and strong. The MOST appropriate treatment for her injury involves:

A. wrapping her entire knee area with a pillow.

Rationale: Providers can wrap the knee with a pillow to splint it. It is most important to splint the joint in the position it was found.

B. splinting the leg in the position in which it was found.

Rationale: Correct answer

10. A patient injured her knee while riding a bicycle. She is lying on the ground, has her left leg flexed, is in severe pain, and cannot move her leg. Your assessment reveals obvious deformity to her left knee. Distal pulses are present and strong. The MOST appropriate treatment for her injury involves:

C. straightening her leg and applying two rigid board splints.

Rationale: The straightening of a joint injury is contraindicated if the pulses are intact.

D. straightening her leg and applying and inflating an air splint.

Rationale: Air splints are not effective on joint injuries that are flexed.