

Sports Medicine Essentials

Sports Medicine · Answer Key · 25 Questions

1. Which protein is the primary structural component of tendons and ligaments?

- A) Elastin
- B) Collagen**
- C) Keratin
- D) Myosin

2. What is the medical term for the inflammation of a tendon?

- A) Tendinosis
- B) Tenosynovitis
- C) Tendinitis**
- D) Fasciitis

3. Which type of joint movement occurs when a limb is moved away from the midline of the body?

- A) Adduction
- B) Flexion
- C) Abduction**
- D) Extension

4. What is the primary function of the anterior cruciate ligament (ACL) in the knee?

- A) Preventing posterior tibial translation
- B) Preventing anterior tibial translation**
- C) Stabilizing the patella
- D) Absorbing synovial fluid

5. Which phase of tissue healing is characterized by the formation of scar tissue and angiogenesis?

- A) Inflammatory phase
- B) Remodeling phase
- C) Proliferation phase**
- D) Maturation phase

6. What does the acronym RICE stand for in the context of acute injury management?

- A) Rest, Ice, Compression, Elevation**
- B) Recovery, Immobilization, Cold, Extension
- C) Rest, Immobilization, Compression, Exercise
- D) Rehabilitation, Ice, Control, Elevation

7. Which bone is commonly referred to as the 'collarbone'?

- A) Scapula
- B) Sternum
- C) Clavicle**
- D) Humerus

8. What is the main physiological purpose of warming up before intense physical activity?

- A) To increase muscle fiber length
- B) To increase core body temperature and blood flow**
- C) To deplete lactic acid stores
- D) To strengthen connective tissues

9. Which imaging technique is most effective for visualizing soft tissue injuries like a torn meniscus?

- A) X-ray
- B) Computed Tomography (CT)
- C) Magnetic Resonance Imaging (MRI)**
- D) Ultrasound

10. What is the primary role of an osteoblast in bone tissue?

- A) Bone resorption
- B) Bone formation**
- C) Cartilage repair
- D) Nerve signaling

11. Which muscle group is responsible for extending the knee joint?

- A) Hamstrings
- B) Quadriceps**
- C) Gastrocnemius
- D) Adductors

12. What is the term for a complete displacement of a bone from its normal position in a joint?

- A) Sprain
- B) Strain
- C) Subluxation
- D) Luxation**

13. Which physiological process occurs when there is an inadequate supply of oxygen to the muscles during exercise?

A) Aerobic metabolism

B) Anaerobic metabolism

C) Glycogenolysis

D) Protein synthesis

14. Where is the Achilles tendon located?

A) Posterior lower leg

B) Anterior forearm

C) Lateral thigh

D) Medial foot

15. Which mineral is essential for the contraction of skeletal muscles?

A) Iron

B) Calcium

C) Zinc

D) Magnesium

16. What is the function of a bursa?

A) To connect bone to bone

B) To reduce friction between moving parts

C) To store calcium

D) To conduct nerve impulses

17. Which of the following is considered a 'closed' kinetic chain exercise?

A) Bicep curl

B) Leg extension

C) Squat

D) Leg curl

18. What is the term for a stretch or tear of a ligament?

A) Strain

B) Sprain

C) Contusion

D) Fracture

19. Which of these describes a 'greenstick' fracture?

A) A bone break that pierces the skin

B) An incomplete fracture in children

C) A fracture caused by repeated stress

D) A fracture where the bone is shattered

20. What is the primary function of erythrocytes?

- A) Clotting blood
- B) Transporting oxygen**
- C) Fighting infection
- D) Producing hormones

21. Which type of muscle contraction occurs when the muscle develops tension without changing length?

- A) Concentric
- B) Eccentric
- C) Isometric**
- D) Isokinetic

22. What is the term for the specialized nerve endings that sense changes in muscle length?

- A) Golgi tendon organs
- B) Muscle spindles**
- C) Nociceptors
- D) Baroreceptors

23. Which movement describes turning the sole of the foot inward toward the midline?

- A) Eversion
- B) Inversion**
- C) Dorsiflexion
- D) Plantarflexion

24. What is the primary energy substrate used during high-intensity, short-duration anaerobic exercise?

- A) Fatty acids
- B) Glucose
- C) Phosphocreatine**
- D) Protein

25. Which part of the brain is primarily responsible for coordinating movement and maintaining balance?

- A) Cerebrum
- B) Brainstem
- C) Cerebellum**
- D) Hypothalamus