Orthopaedic Study Guide

This study guide was developed for medical students by the Orthopaedic Academy committee on undergraduate medical education. These questions are taken from subject’s representative of an orthopaedic care curriculum developed by this committee. Although this is not a test, you are expected to complete this guide and return it to your preceptor. These topics are discussed in Musculoskeletal Medicine.

1. What common problem must all newborns be examined for?

2. What is a compartment syndrome?

3. Acute septic arthritis of the knee may be differentiated from inflammatory arthritis by which laboratory test?

4. A patient dislocates his knee in a car accident. What structure(s) is/are at risk for injury and therefore must be evaluated?

5. A patient punches his companion in the face a sustains a fracture of the 5th metacarpal and a 3-mm break in the skin over the fracture. What is the correct treatment, and why?
6. A patient comes to the office complaining of low-back pain that wakes him up from sleep. What two diagnoses are you concerned about?

7. How is compartment syndrome treated?

8. A patient falls and lands on his hand and is tender to palpation in the “snuff box” (the space between the thumb extensor and abductor tendons). Initial radiographs do not show a fracture. What diagnosis must be considered?

9. A 25-year old male is involved in a motor-vehicle accident. His left limb is in a position of flexion at the knee and hip, with internal rotation and adduction of the hip. What is the most likely diagnosis?

10. What nerve is compressed in carpal tunnel syndrome?

11. A patient has a disc herniation pressing on the 5th lumbar nerve root. How is motor function of the 5th lumbar nerve root tested?

12. How is motor function of the median nerve tested in the hand?
13. A 12-year old boy severely twists his ankle. Radiographs show only soft-tissue swelling. He is tender at the distal aspect of the fibula. What are two possible diagnoses?

14. A patient presents with new-onset low back pain. Under what conditions are plain radiographs indicated? Please name 5 (example: history of trauma)

15. A patient has a displaced fracture near the fibular neck. What structure is at risk for injury?

16. A 20-year old injured his knee while playing football. You see him on the same day, and he has a knee effusion. An aspiration shows frank blood. What are the three most common diagnoses?

17. What are the five most common sources of cancer metastatic to bone?

18. Name two differences between rheumatoid arthritis and osteoarthritis.
19. Which malignancy may be present in bone, yet typically is not detected with a bone scan?

20. What is the function of the normal anterior cruciate ligament at the knee?

21. What is the difference between osteoporosis and osteomalacia?

22. In elderly patients, displaced fractures of the femoral neck are typically treated with joint replacement, whereas fractures near the trochanter are treated with plates and screw. Why?

23. What muscle(s) is/are involved in lateral epicondylitis (tennis elbow)?

24. Rupture of the biceps at the elbow results in weakness of both elbow flexion and ________________________________.

25. What muscle(s) control(s) external rotation of the humerus with the arm at the side?