

Lower Extremity Anatomy Quiz Answer Key PDF

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Which ligament stabilizes the lateral side of the knee?

- A. Anterior cruciate ligament
- B. Medial collateral ligament
- C. Lateral collateral ligament ✓**
- D. Posterior cruciate ligament

The Achilles tendon connects which muscle group to the heel bone?

- A. Quadriceps
- B. Hamstrings
- C. Calf muscles ✓**
- D. Gluteal muscles

Discuss the clinical significance of the sciatic nerve and potential complications associated with its injury.

The clinical significance of the sciatic nerve lies in its role in innervating the posterior thigh, lower leg, and foot, making it essential for movement and sensation. Injury to the sciatic nerve can result in sciatica, characterized by pain radiating down the leg, as well as potential complications like muscle weakness, loss of reflexes, and impaired ability to walk.

Which nerves supply the lower leg and foot? (Select all that apply)

- A. Sciatic nerve
- B. Femoral nerve
- C. Tibia nerve ✓**
- D. Peroneal nerve ✓**

What are the common symptoms and causes of osteoarthritis in the knee joint?

Common symptoms of osteoarthritis in the knee joint include pain, stiffness, swelling, and decreased range of motion. The causes are primarily age, obesity, previous joint injuries, and repetitive stress.

Which of the following are part of the tarsal bones? (Select all that apply)

- A. Talus ✓**
- B. Navicular ✓**
- C. Cuboid ✓**
- D. Metatarsals

What is the primary movement of the knee joint?

- A. Rotation
- B. Flexión and extension ✓**
- C. Abduction and adduction
- D. Circumduction

Explain the gait cycle and its phases in the context of lower extremity movement.

The gait cycle is divided into two main phases: the stance phase, where the foot is in contact with the ground (approximately 60% of the cycle), and the swing phase, where the foot is off the ground and moving forward (approximately 40% of the cycle). The stance phase includes initial contact, loading response, mid-stance, terminal stance, and pre-swing, while the swing phase includes initial swing, mid-swing, and terminal swing.

Describe the role of the anterior cruciate ligament (ACL) in knee stability.

The ACL stabilizes the knee joint by connecting the femur to the tibia and preventing the tibia from sliding forward, thus ensuring proper knee function during dynamic movements.

Which bone is the longest in the human body?

- A. tibia
- B. Femur ✓**
- C. Fibula
- D. Humerus

Which artery is the main blood supply to the thigh?

- A. Popliteal artery
- B. Femoral artery ✓**
- C. Tibia artery
- D. Peroneal artery

What type of joint is the hip joint?

- A. Hinge
- B. Ball and socket ✓**
- C. Pivot
- D. Saddle

Which nerve is the largest in the human body?

- A. Femoral nerve
- B. Obturator nerve
- C. Sciatic nerve ✓**
- D. Tibia nerve

Which movements are possible at the hip joint? (Select all that apply)

- A. Flexión ✓**
- B. Extension ✓**
- C. Abduction ✓**
- D. Inversion

Which condition is characterized by inflammation of the plantar fascia?

- A. Achilles tendinitis
- B. Plantar fasciitis ✓**
- C. Bursitis
- D. Osteoarthritis

Which bones form the ankle joint? (Select all that apply)

- A. Talus ✓
- B. Calcaneus
- C. Tibia ✓
- D. Fibula ✓

Outline the steps involved in performing a Lachman test and its purpose in clinical examination.

To perform a Lachman test, the patient lies supine with the knee flexed at 20-30 degrees. The examiner stabilizes the femur with one hand while using the other hand to pull the tibia forward. A positive test indicates increased anterior translation of the tibia, suggesting ACL injury.

How does the structure of the femur contribute to its function in the lower extremity?

The structure of the femur, characterized by its length, strength, and ball-and-socket joint at the hip, provides stability and mobility, enabling efficient weight-bearing and locomotion in the lower extremity.

Which of the following are ligaments of the knee? (Select all that apply)

- A. Anterior cruciate ligament ✓
- B. Deltoid ligament
- C. Posterior cruciate ligament ✓
- D. Iliofemoral ligament

Which muscles are involved in knee extension? (Select all that apply)

- A. Quadriceps ✓
- B. Hamstrings
- C. Gastrocnemius
- D. Sartorius