Which structure is most important in resisting hyperextension of the hip joint?

a. adductor magnus muscle  
b. rectus femoris muscle  
c. ligamentum teres of the femur  
d. iliofemoral ligament  
e. transverse acetabular ligament  
Answer = D

All of the following are correct statements about the sartorius muscle, EXCEPT that it

a. flexes the leg.  
b. flexes the thigh.  
c. laterally rotates the thigh.  
d. adducts the thigh.  
e. attaches to the anterior superior iliac spine.  
Answer = D

All of the following structures are found in the second layer of the foot, EXCEPT:

a. tendon of the flexor digitorum longus  
b. lumbricals  
c. tendon of the flexor hallucis longus  
d. adductor hallucis  
e. quadratus plantae muscle  
Answer = D

The dorsalis pedis artery is a continuation of the:

a. anterior tibial (deep peroneal) artery  
b. superficial peroneal artery  
c. posterior tibial artery  
d. saphenous artery  
e. none of the above  
Answer = A

The lateral femoral cutaneous nerve (lateral cutaneous nerve of thigh) is a branch of the:

a. obturator nerve  
b. tibial nerve (of the sciatic)  
c. common peroneal nerve (of the sciatic)  
d. femoral nerve  
e. none of the above  
Answer = E

The collateral ligament on the lateral aspect of the knee joint:

A. is a broad band  
b. extends between the lateral B. epicondyle of the femur and the head of the fibula  
c. is part of the joint capsule  
d. has a connection with the lateral meniscus  
e. extends between the lateral E. condyle of the femur and the tibial condyle  
Answer = B

The cruciate arterial circulation of the lower extremity is formed by the anastomosis of branches from:

a. obturator, medial and lateral circumflex femoral, and inferior gluteal arteries.  
b. deep and superficial femorals, medial and lateral circumflex femoral arteries  
c. the fourth perforating, popliteal, saphenous and medial descending arteries  
d. medial and lateral circumflex femoral, inferior gluteal and the first perforating arteries  
e. medial circumflex femoral, obturator, inferior gluteal and the first perforating arteries  
Answer = D

Which ligament prevents anterior displacement of the femur on the tibia?

a. fibular collateral ligament  
b. tibial collateral ligament  
c. anterior cruciate ligament  
d. posterior cruciate ligament  
e. oblique popliteal ligament  
Answer = D

The gastrocnemius and soleus muscles have all of the following in common EXCEPT:

a. tibial nerve supply  
b. are found in the superficial compartment of the posterior leg  
c. origin on femoral condyles (therefore flex the leg)  
d. insertion via the tendon calcaneus  
e. plantar flexion of ankle joint  
Answer = C

Identify the group of muscles innervated by the medial plantar nerve.

a. abductor digiti minimi, lumbral #1, adductor hallucis  
b. flexor digitorum brevis, lumbral #1, quadratus plantae  
c. plantar interossei, adductor hallucis, lumbral #1  
d. flexor hallucis brevis, flexor digitorum brevis, adductor hallucis  
e. flexor digiti minimi brevis, quadratus plantae, dorsal interossei  
Answer = d

The nerve which must be intact to maintain muscle power for keeping the contralateral side of the pelvis from sagging when the weight is put upon one limb is the:

a. inferior gluteal nerve  
b. nerve to the obturator internus  
c. nerve to the quadratus femoris  
d. superior gluteal nerve  
e. sciatic nerve  
Answer = D

Varicosities in the lower limb are caused by:

a. weakness of the walls of the saphenous veins  
b. incompetent valves in perforating veins  
c. continuous, excessive abdominal pressure  
d. occlusion of deep veins  
e. all of the above  
Answer = e

The distal articular surface of the tibia is in contact directly with the tarsal known as the:

a. calcaneus  
b. cuboid  
c. talus  
d. navicular  
e. third cuneiform  
Answer = C

The short head of biceps femoris gains its nerve supply from the:

a. obturator nerve  
b. tibial nerve (of sciatic)  
c. common peroneal nerve (of sciatic)  
d. femoral nerve  
e. none of the above  
Answer = C
Which nerve provides the most extensive cutaneous supply to the medial side of the foot?

a. medial cutaneous nerve of the thigh  
b. lateral plantar nerve  
c. saphenous nerve (L3-L4)  
d. sural nerve (S1-S3)  
Superficial peroneal nerve  
Answer = C

The obturator externus muscle gains its nerve supply from the:

a. obturator nerve  
b. sciatic nerve  
c. inferior gluteal nerve  
d. femoral nerve  
e. more than one of the above  
Answer = a

The artery that accompanies the deep peroneal (fibular) nerve down the leg is the:

a. femoral  
b. saphenous  
c. posterior tibial  
d. anterior tibial  
e. deep femoral  
Answer = D

The major blood supply to the lateral compartment of the leg is provided by:

a. anterior tibial artery.  
b. inferior lateral genicular artery.  
c. peroneal (fibular) artery.  
d. posterior tibial artery.  
e. profunda femoral artery.  
Answer = C

The following group of leg muscles (flexor hallucis longus, flexor digitorum longus and tibialis posterior) has the common action of:

A. eversion  
B. abduction  
C. dorsiflexion  
D. plantar flexion  
E. rotation  
Answer = D

Loss of cutaneous sensation on the medial side of the leg could indicate injury to:

A. superficial peroneal nerve.  
B. deep peroneal nerve.  
C. sural nerve.  
D. tibial nerve.  
E. saphenous nerve.  
Answer = E

Each of the following statements about the great saphenous vein is correct EXCEPT:

A. it frequently has valvular incompetency.  
B. it drains into the femoral vein.  
C. it is anterior to the medial malleolus.  
D. it pierces the cribiform fascia.  
E. it is found in the lateral crural compartment.  
Answer = E

Which is a common action of the sartorius and semitendinosus muscles?

A. flex the leg  
B. flex the thigh  
C. extend the thigh  
D. laterally rotate the thigh  
E. adduct the thigh  
Answer = A

If the foot is permanently dorsiflexed and everted, which nerve might be injured?

A. deep peroneal nerve  
B. superficial peroneal nerve  
C. common peroneal nerve  
D. tibial nerve  
E. femoral nerve  
Answer = D

A patient in the emergency room has a penetrating knife wound in the apex of the femoral triangle. This type of injury could sever all of the following EXCEPT the:

a. profunda (deep) femoral artery.  
b. saphenous nerve.  
c. femoral artery.  
d. femoral nerve.  
e. femoral vein.  
Answer = D

Following a football injury, a physician noted that the tibia could be moved anteriorly with undue freedom, especially when the knee was flexed. The injury should be diagnosed as a torn:

A. anterior cruciate ligament.  
B. lateral collateral ligament.  
C. medial collateral ligament.  
D. posterior cruciate ligament.  
E. oblique popliteal ligament.  
Answer = A

In the foot, the medial plantar nerve innervates:

A. the quadratus plantae.  
B. the plantar interosseous muscles.  
C. the flexor digitorum brevis.  
D. the dorsal interosseous muscles.  
E. the abductor digiti minimi.  
Answer = C

A femoral hernia:

A. is found in the lateral compartment of the femoral sheath.  
B. has adductor longus fascia on its posterior wall.  
C. is not in the femoral sheath.  
D. may turn superiorly in the superficial fascia.  
E. is more common in males than females.  
Answer = D

The peroneal artery:

A. arises from the anterior tibial artery.  
B. gives rise to the medial and lateral inferior genicular arteries.  
C. supplies the lateral crural compartment.  
D. is superficial to the soleus muscle.  
E. continues onto the foot as the dorsalis pedis artery.  
Answer = C
If the dorsalis pedis artery is severed just proximal to its medial and lateral tarsal branches, blood may reach the dorsum of the foot through which of the following vessels?

A. peroneal
B. posterior tibial
C. medial plantar
D. lateral plantar
E. all of the above
Answer = E

A butcher has developed the condition pes planus (flat feet) because he must stand for long periods to cut meat. His condition is largely the consequence of stretching of all of the following structures EXCEPT the

deltoid ligament.
plantar calcaneocuboid ligament.
short plantar ligament.
plantar calcaneocavicular ligament.
long plantar ligament.
Answer = A

A misplaced intramuscular injection in the gluteal region infiltrated the sciatic nerve and its surroundings, giving rise to temporary paralysis of the muscles supplied by that nerve. Muscles involved include all of the following EXCEPT the

A. tibialis anterior.
B. soleus.
C. peroneus brevis.
D. gracilis.
E. popliteus.
Answer = D

All of the following bones contribute to the medial longitudinal arch of the foot EXCEPT the

A. calcaneus.
B. talus.
C. cuboid.
D. navicular.
E. first metatarsal.
Answer = C

The politeal artery:
A. is a direct continuation of the profunda (deep) femoral artery.
B. is superficial to the popliteal vein.
C. usually divides directly into the peroneal and tibial arteries.
D. gives off branches that supply the knee joint.
Answer = D

All of the following muscles insert on the tibia EXCEPT the:

A. biceps femoris.
B. gracilis.
C. semimembranosus.
D. sartorius.
E. semitendinosus.
Answer = A

Complete loss of the superficial peroneal nerve at its origin will:
A. weaken inverion of the foot.
B. cause loss of sensation on the lateral side of the heel.
C. cause loss of sensation on the dorsal surface of the foot.
D. cause loss of sensation on the contiguous sides of the first and second toes.
E. weaken dorsiflexion of the foot.
Answer = C

The adductor canal is characterized by all of the following EXCEPT

A. it can be referred to as the subsartorial canal.
B. it contains the saphenous nerve.
C. it is bounded laterally by the vastus medialis muscle.
D. it is bounded posteriorly by the adductor magnus muscle.
E. it is bounded anteriorly by the adductor longus muscle.
Answer = E

A ligament which prevents hyperextension of the hip joint is the

A. iliofemoral ligament.
B. pubofemoral ligament.
C. ischiofemoral ligament.
D. ligamentum teres (ligament of the head) of the femur.
E. transverse acetabular ligament.
Answer = A

The rectus femoris and sartorius muscles are characterized by all of the following EXCEPT

A. both arise from the ilium.
B. both are innervated by the femoral nerve.
C. both flex the hip.
D. both laterally rotate the hip.
E. that the sartorius is superficial to the rectus femoris in the upper thigh.
Answer = D

If the popliteal artery is tied above its descending genicular branch, blood may still flow into its tibial and peroneal branches through anastomoses involving any of the following vessels EXCEPT

A. the descending branch of the lateral femoral circumflex artery.
B. superior lateral genicular branches of the popliteal artery.
C. inferior lateral genicular branches of the popliteal artery.
D. the distal portion of the profunda femoris inferior to the first perforating branch.
Answer = D

Autonomic innervation to the plantar surface of the foot
A. travels from the posterior crural area via the sural nerve.
B. provides parasympathetic innervation to smooth muscle.
C. is transmitted to the plantar surface in the saphenous nerve.
D. is transmitted as preganglionic fibers.
E. has its origin in the intermediolateral cell column.
Answer = E

The flexor digitorum superficialis muscle of the upper limb is homologous to which muscle in the lower limb?

A. flexor accessorius (quadratus plantae)
B. flexor digitorum longus
C. flexor digitorum minimi brevis
D. flexor digitorum brevis
E. flexor hallucis brevis
Answer = D
All of the following statements are correct concerning the tensor fascia lata muscle EXCEPT

A. it partially arises from the anterior superior iliac spine.
B. it inserts into the iliotibial tract.
C. its main action is to flex the knee.
D. it is innervated by the superior gluteal nerve.
E. it abducts the thigh.
Answer = C

A woman complains that when she wears the tight knee-high boots required for her job, she experiences numbness over the anterolateral surface of the leg and dorsum of the foot. As a brilliant anatomy student you explain

A. the saphenous nerve is likely to be injured.
B. the L2 spinal cord level is involved.
C. if left unattended, could result in dropfoot.
D. if left unattended, could result in numbness on the plantar surface of the foot.
E. the sural nerve is likely to be injured.
Answer = C

The tibial nerve
A. divides into a superficial and deep plantar branch.
B. has a lateral plantar branch which corresponds to the ulnar nerve in the hand.
C. has a medial plantar branch that supplies the abductor digiti minimi.
D. passes anterior to the medial malleolus.
E. contains no sympathetic fibers.
Answer = B

The peroneal artery is a branch of the
A. anterior tibial artery.
B. popliteal artery.
C. arcuate artery.
D. lateral plantar artery.
E. posterior tibial artery.
Answer = E

All of the following muscles plantar flex the foot EXCEPT the
A. gastrocnemius.
B. tibialis posterior.
C. soleus.
D. peroneus longus.
E. peroneus tertius.
Answer = E

The interossei muscles of the foot
A. pass superficial to the deep transverse plantar ligament.
B. on the plantar surface are principally abductors.
C. are all innervated by the lateral plantar nerve.
D. insert into the distal phalanx.
E. are not considered intrinsic muscles.
Answer = C

The anterior crural compartment
A. is supplied by the peroneal (fibular) artery.
B. has muscles innervated by the deep peroneal (fibular) nerve.
C. contains muscles which all take origin from the tibia.
D. contains muscles which plantarflex the foot.
E. is divided by a septum into deep and superficial layers.
Answer = B
During exploratory surgery of the anterior thigh, you observe all of the following structures in the adductor canal EXCEPT the

A. femoral artery.  
B. saphenous nerve.  
C. deep femoral artery.  
D. femoral vein.  
E. nerve to the vastus medialis.  
Answer = C

When the superior gluteal nerve is severely damaged, either by direct injury or disease, which muscle would be paralyzed?

A. gluteus maximus  
B. gluteus medius  
C. obturator internus  
D. piriformis  
E. quadratus femoris  
Answer = B

A child falls on a spike, injuring the upper lateral margin of the popliteal fossa. Which nerve is likely to be injured?

A. common peroneal  
B. tibial  
C. obturator  
D. sciatic  
E. femoral  
Answer = A

Tingling, painful, or itching sensations in the lateral region of the thigh may occur in the older overweight individual as a result of a bulging abdomen compressing a nerve beneath the inguinal ligament. The nerve most likely involved is the

A. intermediate (anterior) cutaneous branch of the femoral.  
B. femoral branch of the genitofemoral.  
C. lateral femoral cutaneous.  
D. genital branch of the genitofemoral.  
E. ilioinguinal.  
Answer = C

Enlargement of the superficial inguinal lymph nodes may result from

A. a sore on the big toe.  
B. a boil on the buttock.  
C. an infected Bartholin's (greater vestibular) gland.  
D. all of the above.  
E. none of the above.  
Answer = D

A loss of plantar flexion of the ankle and a loss of flexion of the toes would indicate injury to the

A. common peroneal nerve.  
B. tibial nerve.  
C. superficial peroneal nerve.  
D. femoral nerve.  
E. deep peroneal nerve.  
Answer = B

All of the following arteries participate in the cruciate anastomosis of the thigh EXCEPT the

A. lateral circumflex femoral artery.  
B. medial circumflex femoral artery.  
C. inferior gluteal artery.  
D. first perforating artery.  
E. obturator.  
Answer = E

The inferior gluteal nerve

A. emerges superior to the piriformis muscle.  
B. innervates the tensor fascia lata muscle.  
C. exits the pelvis through the lesser sciatic foramen.  
D. innervates the gluteus maximus muscle.  
E. innervates the quadratus femoris muscle.  
Answer = D

The posterior tibial artery

A. begins at the adductor hiatus.  
B. descends in the superficial posterior compartment of the leg.  
C. travels with the deep peroneal nerve.  
D. gives rise to the dorsalis pedis artery.  
E. gives rise to the peroneal artery.  
Answer = E

Strong extension at the hip joint as occurs when climbing stairs is primarily a consequence of contraction of the

A. gluteus minimus muscle.  
B. gluteus medius muscle.  
C. gluteus maximus muscle.  
D. piriformis muscle.  
E. adductor magnus muscle.  
Answer = C

The two divisions of the obturator nerve are situated anterior and posterior to which of the following muscles?

A. obturator externus  
B. adductor longus  
C. pectineus  
D. adductor brevis  
E. obturator internus  
Answer = D

Footdrop is caused by damage to the

A. tibial nerve.  
B. medial plantar nerve.  
C. lateral plantar nerve.  
D. common peroneal nerve.  
E. sural nerve.  
Answer = D

A radiologist wished to catheterize the femoral artery in order to perform an arteriogram to visualize the branches of the abdominal aorta. To avoid injury to other structures in the area the radiologist attempted to locate the artery in the

A. intermediate compartment of the femoral sheath.  
B. area deep to the femoral vein at the apex of the femoral triangle.  
C. medial compartment of the femoral sheath.  
D. area lateral to the femoral sheath.  
E. lateral compartment of the femoral sheath.  
Answer = E

The "spring" ligament is a synonym for the

A. long plantar ligament.  
B. plantar calcaneocuboid ligament.  
C. plantar calcaneonavicular ligament.  
D. the interosseous talocalcaneal ligament.  
E. the short plantar ligament.  
Answer = C
A muscle which can simultaneously flex, abduct and laterally rotate the thigh while flexing the leg is the
A. gracilis.
B. rectus femoris.
C. semitendinosus.
D. sartorius.
E. iliacus.
Answer = D

All of the following are correct statements about the sartorius muscle EXCEPT that it
A. flexes the leg.
B. flexes the thigh.
C. laterally rotates the thigh.
D. adducts the thigh.
E. attaches to the anterior superior iliac spine.
Answer = D

A misdirected intramuscular injection in the gluteal region infiltrated the sciatic nerve. Muscles affected include all of the following EXCEPT the
A. tibialis anterior.
B. soleus.
C. peroneus brevis.
D. gracilis.
E. popliteus.
Answer = D

The peroneal artery
A. arises from the anterior tibial artery.
B. gives rise to the medial and lateral inferior genicular arteries.
C. supplies the lateral crural compartment.
D. is superficial to the soleus muscle.
E. usually continues onto the foot as the dorsalis pedis artery.
Answer = C

Loss of cutaneous sensation on the medial side of the leg could indicate injury to the
A. superficial peroneal nerve.
B. deep peroneal nerve.
C. sural nerve.
D. tibial nerve.
E. saphenous nerve.
Answer = E

A 47 year old male sustained an injury to his left lower limb. You observe that his foot is dorsiflexed and partially everted. You suspect that there might be an injury to the
A. deep peroneal nerve.
B. superficial peroneal nerve.
C. common peroneal nerve.
D. tibial nerve.
E. femoral nerve.
Answer = D

Each of the following muscles is a lateral rotator of the thigh EXCEPT the
A. piriformis.
B. quadratus femoris.
C. tensor fascia lata.
D. obturator internus.
E. superior gemellus.
Answer = C

Absence of which of the following pulses could be associated with anterior compartment syndrome?
A. Popliteal
B. Femoral
C. Dorsalis pedis
D. Peroneal (Fibular)
Answer = C

When examining a patient you observe that the right side of the pelvis sags when the patient is asked to stand on the left foot. Which of the following diagnoses is most likely correct?
A. The greater trochanter of the right femur is fractured.
B. The left superior gluteal nerve has been severed.
C. The lesser trochanter of the left femur is fractured.
D. The right inferior gluteal nerve has been severed.
E. The right iliofemoral ligament has been ruptured.
Answer = B

Each of the following statements regarding the arches of the foot is correct EXCEPT that the
A. navicular bone aids in maintenance of the medical longitudinal arch.
B. tendon of the tibialis posterior muscle supports the plantarcalcaneonavicular (spring) ligament.
C. long plantar ligament supports the lateral longitudinal arch.
D. tendon of peroneus (fibularis) longus muscle supports the transverse arch.
E. calcaneus participates in the formation of all three arches.
Answer = E

A patient has a fracture of the medial malleolus, and you suspect a nerve has been severed. The appropriate procedure to test for this nerve would be to
A. test cutaneous innervation on the plantar surface of the foot.
B. test cutaneous innervation on the dorsum of the foot.
C. have the patient flex the toes.
D. have the patient invert the foot.
E. have the patient plantarflex the ankle.
Answer = A

Each of the following muscles can flex the thigh EXCEPT the
A. sartorius.
B. rectus femoris.
C. obturator externus.
D. iliacus.
E. psoas major.
Answer = C

The posterior tibial artery
A. begins at the adductor hiatus.
B. descends in the superficial posterior compartment of the leg.
C. travels with the deep peroneal (deep fibular) nerve.
D. gives rise to the dorsalis pedis artery.
E. gives rise to the peroneal (fibular) artery.
Answer = E

A muscle acting on both the knee and ankle joints is the
A. flexor hallucis longus.
B. gastrocnemius.
C. extensor digitorum longus.
D. soleus.
E. peroneus longus.
Answer = B
Interruption of the superior gluteal nerve will result in

A. an inability to stand from a sitting position.
B. an inability to abduct the lower extremity at the hip.
C. an inability to laterally rotate the thigh.
D. a loss of sensation over the upper gluteal region.
Answer = B

All of the following structures support the plantar arches EXCEPT the

A. tendon of the peroneus brevis muscle.
B. plantar calcaneonavicular ligament.
C. tendon of tibialis posterior muscle.
D. long plantar ligament.
E. tendon of peroneus longus muscle.
Answer = A

The artery(ies) supplying most of the posterior compartment of the thigh is(are) the

A. obturator artery.
B. inferior gluteal artery.
C. lateral femoral circumflex artery.
D. perforating branches of deep femoral artery.
E. medial femoral circumflex artery.
Answer = D

The greater sciatic foramen transmits all of the following structures EXCEPT the

A. sciatic nerve.
B. tendon of the obturator internus muscle.
C. pudendal nerve.
D. superior gluteal nerve.
E. inferior gluteal nerve.
Answer = B

The principal nerve supply to the medial compartment of the thigh is the

A. tibial division of the sciatic nerve.
B. obturator nerve.
C. femoral nerve.
D. common peroneal division of the sciatic nerve.
Answer = B

All of the following structures pass through the adductor (subsartorial) canal EXCEPT the

A. posterior division of the obturator nerve
B. saphenous nerve
C. femoral artery
D. nerve to the vastus medialis
E. femoral vein
Answer = A

All of the following are correct statements about the dorsalis pedis artery EXCEPT that

A. it is usually a continuation of the anterior tibial artery.
B. it has a branch that contributes to the formation of the plantar arch.
C. it can be palpated between the extensor hallucis longus and extensor digitorum longus tendons.
D. its branches include the arcuate artery.
E. it is accompanied by the superficial peroneal fibular nerve.
Answer = E

All of the following muscles flex the hip joint EXCEPT the

A. iliopsoas.
B. sartorius.
C. rectus femoris.
D. gracilis.
E. pectineus.
Answer = D

Eversion of the foot takes place mainly in the

A. transverse tarsal joint.
B. subtalar joint.
C. talofibular joint.
D. talocrural joint.
Answer = B

Damage to the tibial division of the sciatic nerve may result in all of the following defects EXCEPT the

A. weakness in plantar flexion at the ankle.
B. loss of sensation over the lateral aspect of the leg.
C. weakness in flexing the knee.
D. loss of sensation over the tips of the toes.
E. inability to unlock the knee joint.
Answer = B

Which of the following muscles moves both the knee and ankle joints?

A. flexor hallucis longus
B. peroneus longus
C. soleus
D. popliteus
E. gastrocnemius
Answer = E

The quadratus plantae muscle is innervated by the

A. medial plantar nerve.
B. deep peroneal nerve.
C. lateral plantar nerve.
D. medial calcaneal branch of the tibial nerve.
E. superficial peroneal nerve.
Answer = C

The femoral nerve

A. is medial to the femoral artery in the femoral triangle.
B. supplies cutaneous innervation to the front of the thigh and anteromedial knee and leg.
C. innervates muscles which are extensors at the hip joint.
D. originates from spinal cord segments S2, 3 and 4.
E. is located within the femoral sheath.
Answer = B

The patient suffered a small caliber gunshot wound to the right gluteal region which severed the right sciatic nerve and disrupted the distal attachment of the piriformis muscle. All of the statements regarding this patient are most likely correct EXCEPT that the

A. patient cannot dorsiflex the right ankle.
B. muscular support to the medial and longitudinal arches of the right foot has been lost.
C. patient has a positive Trendelenburg sign on the right side.
D. patient cannot stand on their right toes.
E. patient has a loss of cutaneous sensation on the sole of the right foot.
Answer = C
The tensor fascia latae muscle is innervated by the
A. femoral nerve.
B. obturator nerve.
C. common peroneal nerve.
D. superior gluteal nerve.
E. inferior gluteal nerve.
Answer = D

A common action of the gastrocnemius and semitendinosus muscles is
A. flexion of the knee joint.
B. flexion of the hip joint.
C. extension of the hip joint.
D. lateral rotation of the knee joint.
E. medial rotation of the knee joint.
Answer = A

All of the following statements about the great saphenous vein are correct EXCEPT that it
A. frequently has valvular incompetency.
B. drains into the femoral vein.
C. passes anterior to the medial malleolus.
D. pierces the ecribriform fascia.
E. is found in the lateral crural compartment.
Answer = E

All of the following statements concerning the tendons of the flexor digitorum longus muscle in the foot are correct EXCEPT that they
A. receive the insertion of the quadratus plantae muscle.
B. give origin to the lumbricals, on their medial aspect.
C. pierce the tendons of the flexor digitorum brevis muscle.
D. attach to the distal phalanges of digits 2-5.
E. are located deep to the tendon of the peroneus longus muscle.
Answer = E

In patients with cerebral palsy who have marked spasticity of the adductor group of muscles, it is common practice to sever the nerve supply to this compartment in order to overcome the spasm of this muscle group. During the surgical procedure the surgeon severs the
A. femoral nerve.
B. obturator nerve.
C. sciatic nerve.
D. inferior gluteal nerve.
E. pudendal nerve.
Answer = B

A patient seen in the ER with a gunshot wound that entered the anterior thigh about 5 cm inferior to the inguinal ligament and exited 5 cm inferior to the gluteal fold. Upon examination you determine that the patient is unable to extend the knee and there is loss of skin sensation over the medial side of the lower part of the leg. Related to the above symptoms, you suspect injury to
A. the obturator nerve.
B. branches of the femoral nerve.
C. the tibial portion of the sciatic nerve.
D. the common peroneal (fibular) portion of the sciatic nerve.
E. the entire sciatic nerve.
Answer = B

A patient had poliomyelitis which involved the lower lumbar and sacral segments of the spinal cord (L4, L5 and S1) and subsequent paralysis of muscles which prevent pelvic tilt during walking. The nerve most likely involved is the
A. sciatic.
B. femoral.
C. inferior gluteal.
D. superior gluteal.
E. obturator.
Answer = D

The engineering methods used in the design of stone bridges are basically the same as those used in the anatomical construction which supports the arches the feet. All of the following are mechanisms of arch support in the feet EXCEPT that the
A. talus is keystone in the center of the medial longitudinal arch.
B. plantar calcaneonavicular (spring) ligament supports the medial longitudinal arch and prevents sagging of the arch.
C. tendon of the flexor hallucis longus muscle assists in tying together the ends of the medial longitudinal arch.
D. long & short plantar ligaments counteract the tendency of the lower edges of the medial longitudinal arch to separate when the arch is wt.-bearing the peroneus longus tendon and the peroneus brevis muscle E. suspend the transverse arch from above
Answer = D

A physician drained fluid from an inflamed bursa on the anterior aspect of the knee joint. During the procedure he introduced bacteria into the bursal sac which quickly spread to the synovial cavity of the knee joint. The bursa he most likely drained was the
A. suprapatellar.
B. prepatellar.
C. superficial infrapatellar.
D. popliteal.
E. deep infrapatellar.
Answer = A

While rotating through the ER at Children's Hospital, you see a patient whose right foot is dorsiflexed and everted. You suspect injury to the
A. deep peroneal nerve.
B. superficial peroneal nerve.
C. common peroneal nerve.
D. tribial nerve.
E. femoral nerve.
Answer = D

During the physical examination of a patient, you observe that when you ask him to put his weight on the right foot and lift the left foot the left pelvis drops significantly. The nerve which probably has been damaged is the
A. inferior gluteal nerve.
B. nerve to the obturator internus.
C. nerve to the gradratus femoris.
D. superior gluteal nerve.
E. sciatic nerve.
Answer = D

An osteosarcoma (bone tumor) of the tibia that impairs the function of the flexor hallucis longus, flexor digitorum longus and tibialis posterior muscles would affect the action of
A. eversion.
B. abduction.
C. dorsiflexion.
D. plantar flexion.
Answer = D
During surgery to loosen a thickening of the flexor retinaculum at the ankle, the surgeon could easily have injured tendons of any of the following muscles EXCEPT the

A. flexor digitorum longus muscle.
B. flexor hallucis longus muscle.
C. tibialis anterior muscle.
D. tibialis posterior muscle.
Answer = C

You suspect that a patient has anterior compartment syndrome. Your suspicion is strengthened by the fact that you cannot detect a pulse in the

A. popliteal artery.
B. femoral artery.
C. dorsalis pedis artery.
D. peroneal (fibular) artery.
Answer = C

During his lecture, Dr. Miller demonstrated he was able to stand erect with little muscle activity due to stabilization of the hip joint by the

A. iliofemoral ligament.
B. pubofemoral ligament.
C. ischiofemoral ligament.
D. ligamentum teres (ligament of the head) of the femur.
E. transverse acetabular ligament.
Answer = A

During removal of a tumor confined to the popliteal fossa, the surgeon used a posterior, midline approach. During the dissection, he identified all of the following structures in the fossa EXCEPT

A. the popliteal artery.
B. lymph nodes.
C. the tibial nerves.
D. genicular arteries.
E. the great saphenous vein.
Answer = E

A 47-year-old female patient was diagnosed with widespread varicose veins extending from the lower thigh down to the dorsum of the foot. Surgical treatment was required and you reviewed some important information about the veins of the lower extremity which included all of the following EXCEPT that

A. large varicose veins possess incompetent valves.
B. contraction of muscles and arterial pulsations help to compress the veins and move the blood superiorly.
C. the short saphenous vein drains the medial end of the dorsal venous arch of the foot.
D. the femoral and popliteal veins receive the long and short saphenous veins, respectively.
E. perforating veins carry blood from the superficial to the deep veins.
Answer = C

A 66-year-old male with a history of diabetes mellitus was admitted to the hospital because of poor circulation of blood to his left leg. As a medical student you know that it is important in a patient with circulatory problems to periodically check and document the color, temperature, and quality of the peripheral pulses of both legs. Palpable pulses in the lower extremities can be obtained in each artery at each of the following sites EXCEPT the

A. femoral artery at a point midway between the anterior superior iliac spine and the symphysis pubis.
B. popliteal artery in the popliteal fossa.
C. posterior tibial artery posterior to the medial malleolus.
D. the femoral artery in the adductor canal.
E. the dorsalis pedis artery anterior to the ankle.
Answer = D

A child falls on a spike injuring a nerve in the upper lateral margin of the popliteal fossa. This results in

A. a sensory loss that includes the dorsum of the foot.
B. dorsiflexion of the foot.
C. flexion of the toes.
D. a sensory loss that includes the lateral plantar surface of the foot.
Answer = B

A patient was scheduled for surgery to cannulate the great saphenous vein. During the cutdown and preparation of the vein for insertion of the cannula, the patient experiences pain radiating along the medial side of the leg. The nerve most likely to be accidentally injured during the cannulation procedure is the

A. sural nerve
B. medial femoral cutaneous nerve.
C. saphenous nerve.
D. superficial peroneal nerve.
Answer = C

A 6-year-old fell on the sharp edge of a tin can, which caused a deep wound immediately posterior to the medial malleolus. In the ER, you examine the wound for evidence of injury to all of the following EXCEPT the

A. posterior tibial artery.
B. flexor retinaculum.
C. tendon of the peroneus longus muscle.
D. tendon of the tibialis posterior muscle.
E. tibial nerve.
Answer = C

A person experiences weakness when climbing stairs. Neurologic examination reveals the knee-jerk reflex (quadriceps muscle group is functioning normally) and the patient can stand on his heels and toes. With this information, in addition to the knowledge that thigh extension is weak on the right side and thigh abduction and adduction are normal, it can be concluded that the innervation involved in this patient's problem involves the

A. common peroneal nerve.
B. femoral nerve.
C. inferior gluteal nerve.
D. obturator nerve.
E. tibial nerve.
Answer = C

You examine an adult patient who has avascular necrosis of the femoral head. This is a likely sequela to (consequence of)

A. dislocation of the hip with tearing of the ligamentum teres of the femur.
B. intertrochanteric fracture of the femur.
C. intracapsular femoral neck fracture.
D. thrombosis of the obturator artery in the obturator canal.
Answer = C

During childbirth, a 35-year-old female experienced trauma to her obturator nerve. All of the following are at least partially supplied by the obturator nerve EXCEPT the

A. adductor brevis
B. gracilis.
C. adductor magnus.
D. sartorius.
E. skin of the medial thigh.
Answer = D
A fractured pelvis, damaging the pudendal nerve, would result in the loss of all of the following EXCEPT the

A. innervation of the deep transverse perineus muscle.
B. sensory input from the glans penis.
C. innervation of the ischiocavernosus muscle.
D. innervation of the piriformis muscle.
Answer = D

In preparation for a gluteal injection in an obese patient, you remember that the major neural structure located deep to the gluteus medius muscle is the

A. sciatic nerve.
B. inferior gluteal nerve.
C. superior gluteal nerve.
D. internal pudendal nerve.
E. nerve to the obturator internus muscle.
Answer = C

During surgery of the posterior compartment of the thigh, the surgeon avoided injury to the major vessel(s) that supply the muscles in this compartment, which are

A. perforating branches of the deep femoral artery.
B. branches of the obturator artery.
C. branches of the lateral femoral circumflex artery.
D. branches of the medial femoral circumflex artery.
Answer = A

During an examination of a patient, the physician notices that the patient displaces his shoulders posteriorly at right heel strike. This displacement suggests a paralysis or weakness of the right

A. gluteus maximus muscle.
B. gluteus medius muscle.
C. quadriceps femoris muscle.
D. tibialis anterior muscle.
E. gastrocnemius muscle.
Answer = A

While evaluating an x-ray for a possible fracture of a patient's foot, you examine all the bones that contribute to the medial longitudinal arch. These bones include all of the following EXCEPT the

A. calcaneus.
B. talus.
C. cuboid.
D. navicular.
E. first metatarsal.
Answer = C

A penetrating injury to the right gluteal region in a 24-year-old male patient resulted in damage to the tibial division of the sciatic nerve. All of the following defects could result from this injury EXCEPT

A. weakness in plantar flexion at the ankle joint.
B. the loss of sensation over the superolateral aspect of the leg.
C. weakness in flexing the knee joint.
D. the loss of sensation on the heel.
E. inability to unlock the knee joint.
Answer = B

In preparation for replacement of the hip joint of a 75-year-old female, you reviewed the muscles which cross the hip joint and you recalled that all of the following muscles flex the hip joint EXCEPT the

A. iliopsoas.
B. sartorius.
C. rectus femoris.
D. vastus intermedius.
E. pectineus.
Answer = D

When rotating through the ER, you are asked to examine a 66-year-old child who stepped on a piece of glass while running barefoot through an alley. You observe a loss of sensation on the lateral 1/3 of the sole of the foot. You suspect that the damaged nerve could also result in paralysis of the

A. abductor hallucis muscle.
B. first lumbrical muscle.
C. flexor hallucis brevis muscle.
D. third lumbrical muscle.
E. peroneus tertius muscle.
Answer = D

A patient in the emergency room has a penetrating knife wound in the apex of the femoral triangle. This type of injury could injure all of the following structures EXCEPT the

A. profunda (deep) femoral artery.
B. saphenous nerve.
C. femoral artery.
D. femoral nerve.
E. femoral vein.
Answer = D

You examine a patient injured in a car accident, whose foot is dorsiflexed and everted. The nerve most likely injured is the

A. deep peroneal nerve.
B. superficial peroneal nerve.
C. common peroneal nerve.
D. tibial nerve.
E. femoral nerve.
Answer = D