

GROSS ANATOMY EXAMINATION I

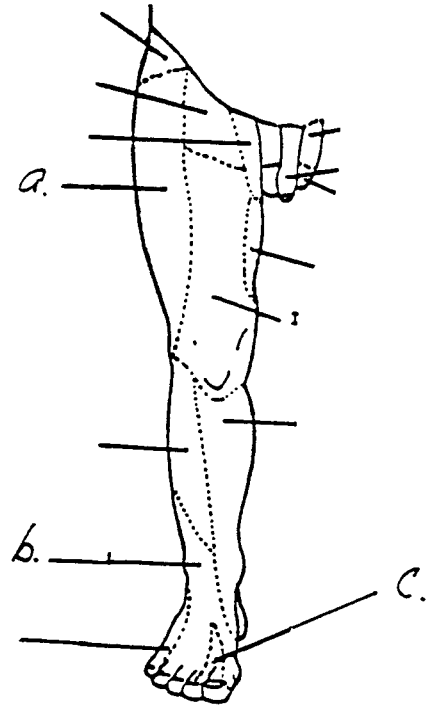
AUGUST 28, 1996

PART I. Answer in the space provided. (13 pts)

1. Identify the cutaneous innervation to the areas indicated. (1.5 pts)

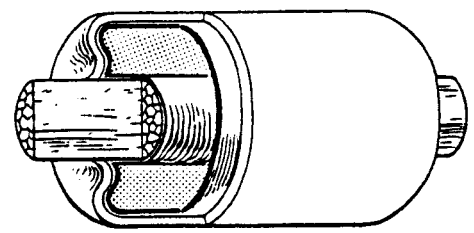
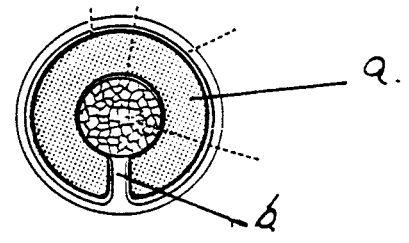
(Figs. 18-15)
P. 413, Hollinshead

- a. Lateral femoral cutaneous
- b. Superficial Peroneal
- c. Deep Peroneal



2. Identify the structures. (1 pt) (Figs. 3-2, P. 19)

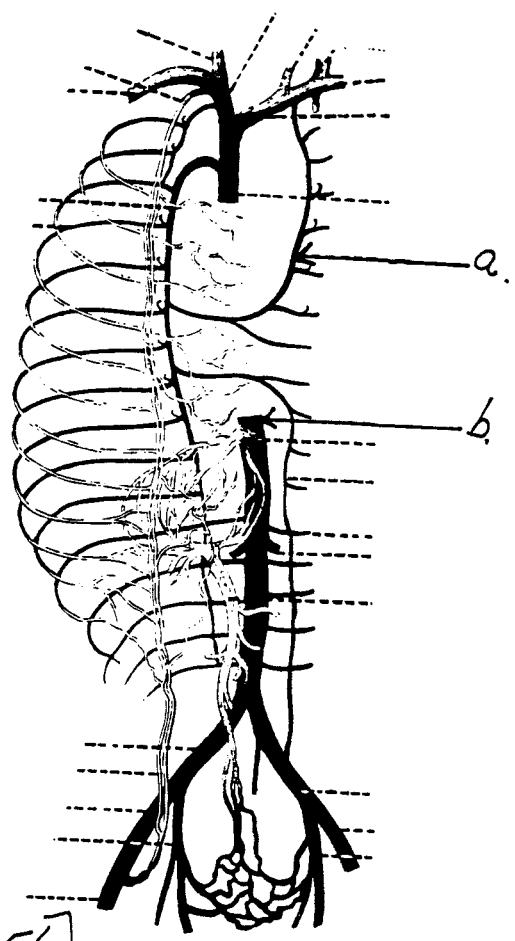
- a. Synovial Cavity
- b. Mesotendon



Diagrams of a tendon sheath.

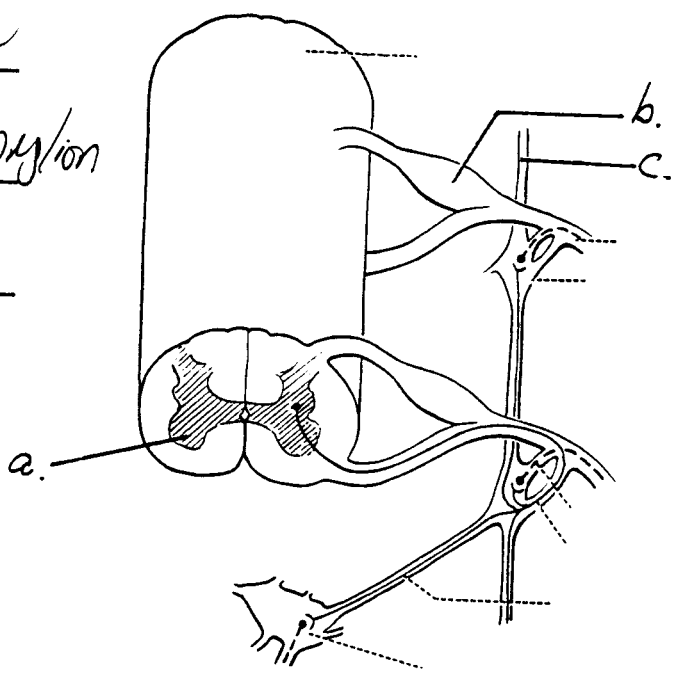
3. Identify the structures. (1 pt) (Figs. 5-6, p. 87)

- a. Accessory hemiazygous vein
- b. Inferior vena cava



4. Identify the structures. (1.5 pts) [Figs. 4-11 p. 56]

- a. Anterior/Ventral Horn
- b. Dorsal Root (Spinal) Ganglion
- c. Sympathetic Trunk



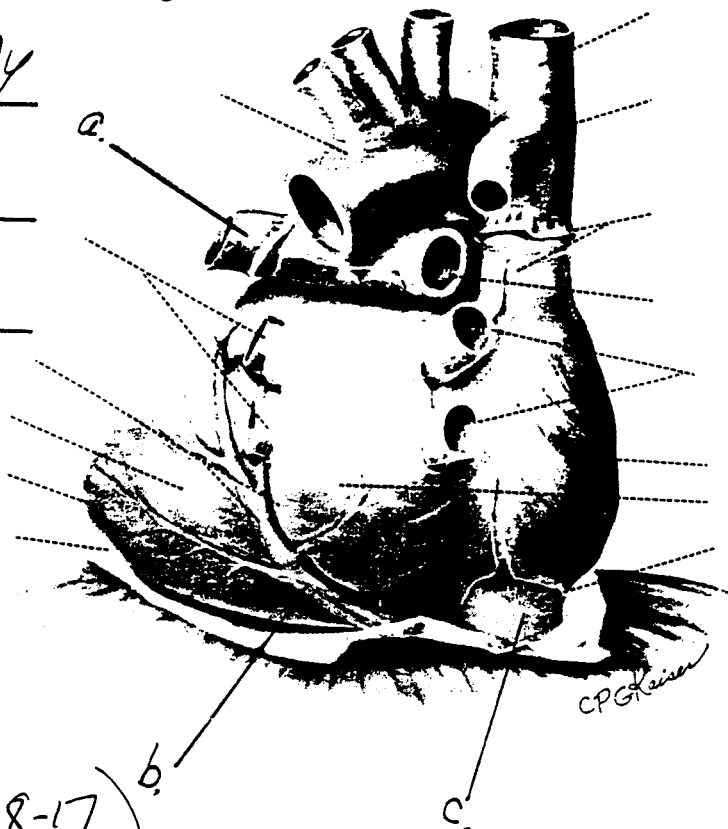
Answer in the space provided.

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5. Identify the structures. (1.5 pts)

(Figs. 21-5, Pg. 523)

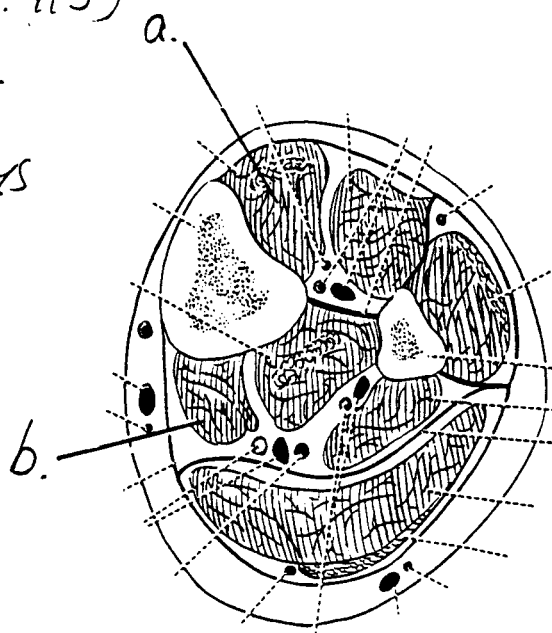
- a. Left Pulmonary Artery
- b. Coronary Vein/Sinus
- c. Inferior Vena Cava



6. Identify the structures. (1 pt)

(Figs. 18-17 B. 415)

- a. Tibialis Anterior
- b. Flexor Digitorum Longus

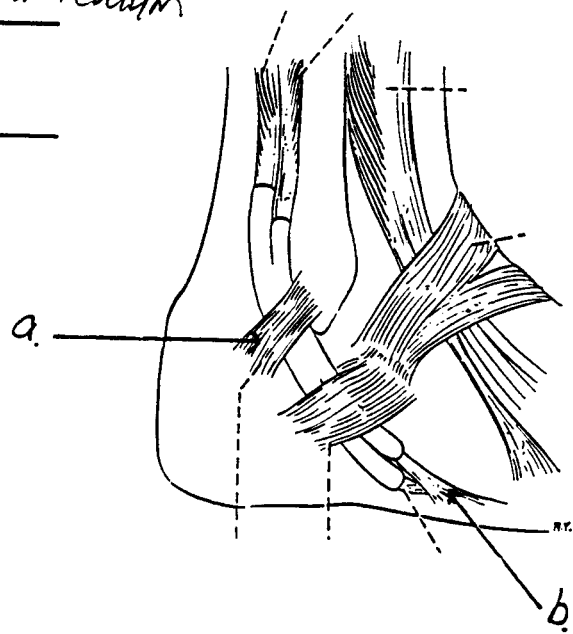


(Figs. 18-20, Pgs. 417)

7. Identify the structures. (1 pt)

a. Superior Peroneal Retinaculum

b. Peroneus Brevis

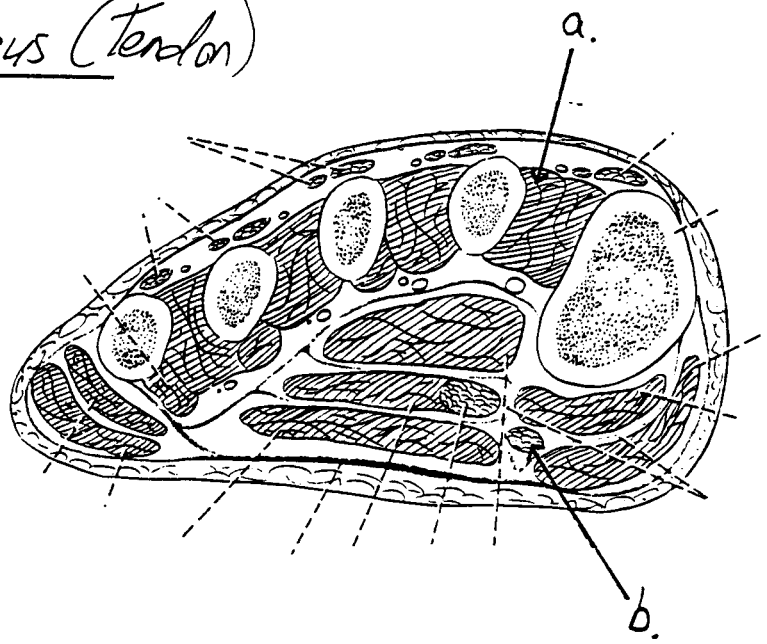


8. Identify the structures. (1 pt)

(Figs. 18-48, Pgs. 440)

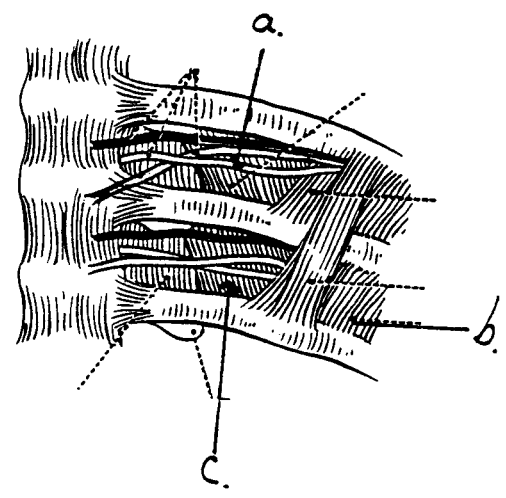
a. 1st Dorsal Interosseous Muscle

b. Flexor Hallucis Longus (Tendon)



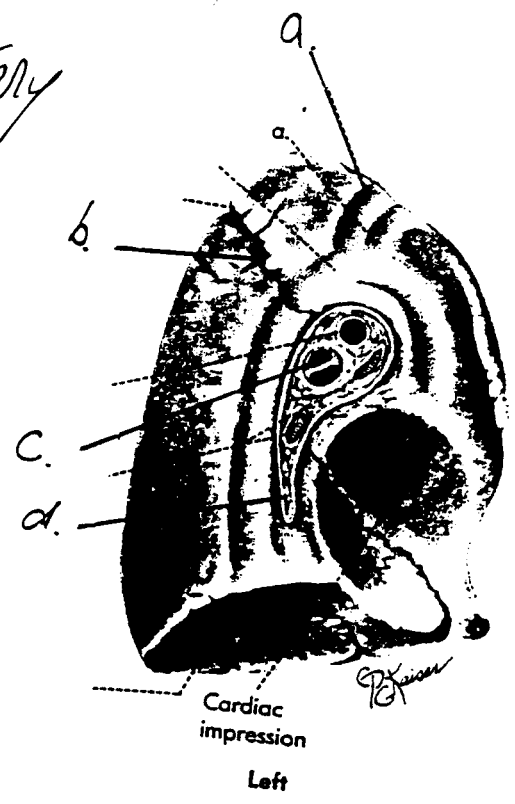
9. Identify the structures. (1.5 pt) (Figs. 19-9, p. 475)

- a. Intercostal Nerve
- b. Innermost Intercostal (Muscle)
- c. External Intercostal (Muscle)
[Internal Intercostal Membrane]



10. Identify the structures. (2 pts) (Figs. 20-3, p. 494)

- a. Left Subclavian Artery
- b. Oblique Fissure
- c. (Left) Bronchus
- d. Pulmonary Ligament



Part II. Indicate your understanding of the following: (19 pts)

a. Extensor hood of the 2nd digit in the foot. (4 pts)

Extensor Digitorum longus
Extensor Digitorum brevis
Lumbrical
Dorsal Interossei (2)
(Extension of I.P. Joint)
(Flexion of M.P. Joint)
(Abduction of digit)

b. Pump-handle movement in respiration. (4 pts)

Ribs 1-6
Sternum-Costochondral/ Sternochondral joint
Costovertebral/ Costovertebral Joints
Anterior-Posterior Expansion

c. Lumbricals. (4 pts)

Origin - Flexor Digitorum Longus Tendon
medial 2, 3, 4, 5
Insertion - Extensor Hood/ Expansion
Flex M.P.
Extend I.P.

d. Septomarginal trabeculae (Moderator band). (3 pts)

Contains Nervous tissue - Conduction of Heart
 Right Ventricle
 Interventricular Septum/Wall → Ant. Papillary Musc.

e. Popliteus muscle. (4 pts)

Origin - Lateral Condyle of femur
 Inserts - Post/medial Tibia
 Limb on ground - laterally rotates femur
 Limb off ground - medially rotates tibia
 Innervation - Tibial
 Vasculature - Popliteal/Post. Tibial Artery/Vein
 Deep Compartment of Leg (Posterior)
 Intra capsular / Extrasynovial
 Separates Lateral Meniscus from lateral
 collateral ligament

Part III. Circle the correct answer. All, none, or some may apply. (10 pts)

1. In regard to the subinguinal region:
 - a. A femoral hernia originates medial to the pubic tubercle.
 - b. The medial femoral circumflex artery passes between the iliopsoas and pectineus muscles in the anterior portion of the thigh.
 - c. The saphenous nerve lies in the femoral triangle.
 - d. Blood drains from deep to superficial veins in the thigh.

2. In the leg:
 - a. The great saphenous vein lies deep to the crural fascia.
 - b. The peroneal artery lies in the superficial compartment of the posterior leg.
 - c. The anterior tibial recurrent artery is part of the genicular anastomosis and is a branch of the posterior tibial artery
 - d. The line of gravity passes in front of the knee.

3. In the foot:
 - a. The medial longitudinal arch extends from the calcaneus to the bases of the metatarsals.
 - b. The transverse arch lies at the level of the distal row of tarsals and the bases of the metatarsals.
 - c. The extensor digitorum brevis muscle does not insert into the dorsum of the 5th phalanx.
 - d. The lateral plantar nerve is often said to be "more muscular, and less cutaneous in innervation" than the medial plantar nerve.

4. With respect to the joints of the lower extremity:

- a. Characteristic clinical features following fractures of the neck of the femur include lateral rotation and shortening of the injured lower limb.
- b. The anterior cruciate ligament is often said to be "intrasynovial and extracapsular".
- c. The medial meniscus is "C-shaped" and attaches to the tibial collateral ligament.
- d. The anterior cruciate ligament arises from the anterior portion of the medial condylar area of the femur.

5. In the thorax:

- a. The internal thoracic artery is derived from the subclavian artery.
- b. OR There are 11 posterior intercostal veins and one subcostal vein.
- c. The lower two-thirds of the esophagus is innervated by the vagus nerve.
- d. White rami communicantes are present at all levels of the spinal cord.

Part IV. Answer in the space provided. (58 pts)

1. A patient comes to your office with an unusual gait and you surmise problems with the gluteal region. Review the anatomy of this region, and include a discussion of the muscles, nerves, vasculature, ligaments, movements and limitations. If upon further examination you suspect injury to the right superior gluteal nerve, how did you arrive at this diagnosis and how will this influence locomotion? (14 pts)

2. Cancer of the breast is responsible for the deaths of over 40,000 women in the U.S. every year; in many cases the tumor cells have spread (metastasis) to other locations by way of the lymphatic system. Indicate your understanding of the lymphatic drainage of the breast. (6 pts)

3. During your rotation in the emergency room, a patient presents with problems in the popliteal fossa. Discuss the anatomy of the popliteal fossa, and include an account of the boundaries, vascular supply, innervation, ligaments, bones, contents, and muscles. (12 pts)

4. In your role as a family practitioner, a patient comes to your office with a problem you suspect involves an infection of the left middle mediastinal wall. Pericardiocentesis reveals an infection in the pericardial cavity, and a pleural tap indicates infectious products in the pleural cavity. Review the structure and contents of the walls composing the left middle mediastinum, and relate this knowledge to the clinical findings. (7 pts)

5. The medial aspect of the ankle is an extraordinarily important area in terms of structures that enter and exit the foot, and may be a source of clinical problems. Summarize the anatomical features of this region, and include discussion of the structures, bones, vascular supply, ligaments, and movements. (11 pts)

6. A tumor along the thoracic region of the vertebral column may increase to such an extent that it interferes with the function of structures in the posterior mediastinum. Discuss the boundaries and content of the posterior mediastinum, and assess the possible clinical symptoms the patient may display. (8 pts)