CADAVER DISSECTION – POSTERIOR THIGH

All of the terms indicated below in BOLD print should be identified during the student’s oral presentation on this region.

PROCEDURE:
I. SURFACE ANATOMICAL LANDMARKS – Prior to dissection, identify the following surface anatomical landmarks of the posterior thigh region: ischial tuberosity of hip bone, great trochanter of femur.

II. SUPERFICIAL VESSELS & NERVES – Determine the location of any major superficial veins or nerves in your area of dissection to avoid damaging these structures as you dissect.
* Locate the great saphenous vein in the subcutaneous tissue on the medial side of the thigh. * Locate the small saphenous vein in the popliteal fossa as it passes deep to join the popliteal vein. The posterior cutaneous nerve of the thigh may be visible as it supplies the posterior portion of the thigh.

III. REMOVAL OF SKIN – Using the following steps, remove the skin from the median line of the posterior thigh medially and laterally.
A. Incision Lines – Use a marking pencil to outline the incision lines (illustrated on the handout). Use a scalpel blade to cut through the skin. Insert a smooth probe under the skin along the remaining incision lines (instructor will demonstrate). When making your remaining incision, only cut to the smooth probe to avoid damaging superficial structures deep to the skin.
   Proximal Incision Line – Cut the skin from a point above the coccyx laterally and inferiorly, following the general outline of the gluteus maximus muscle, to the lateral side of the thigh.
   Posterior Midline Incision Line of Thigh – Cut the skin from the midpoint of the proximal incision line distally along the posterior midline of the thigh to the middle of the popliteal fossa.
   Distal Incision Line – Cut the skin medially and laterally from the distal end of the posterior incision line. * Avoid damaging the small saphenous vein in the popliteal fossa and great saphenous vein in the subcutaneous tissue on the medial side of the knee.
B. Locate the Epimysium of the Hamstring Muscles – Use a smooth probe to locate the separation between the superficial fascia and deep fascia (termed fascia lata in the thigh). Using the smooth probe and your fingers (avoid using the scalpel blade unless absolutely necessary), remove the skin from the posterior midline incision line in both the medial and lateral directions revealing the fascia lata.

IV. MUSCLE IDENTIFICATION AND SEPARATION:
To expose the muscles on the hamstring muscles, make a longitudinal cut through the fascia lata. Except for the portion of the fascia lata on the lateral side, the iliotibial tract, the fascia lata may be removed revealing the hamstring muscle group.
HAMSTRING GROUP – LATERAL SIDE
A Biceps femoris – Identify the biceps femoris muscle extending the from the ischial tuberosity to its insertion on the fibula. Identify both the long head (originating from the ischial tuberosity) and the short head (originating from the linea aspera of the femur).
HAMSTRING GROUP – MEDIAL SIDE

A. **Semitendinosus** – Identify the semitendinosus muscles on the medial side of the posterior thigh from the ischial tuberosity to its medial insertion on the tibia. The distal portion of this muscle is thinner and more superficial than the wider and deeper semimembranosus muscle.

B. **Semimembranosus** – Identify the semimembranosus muscle deep to the semitendinosus muscle on the medial side of the posterior thigh.

MEDIAL COMPARTMENT OF THE THIGH – Identify the following muscles, which belong to the medial compartment of the thigh.

C. **Gracilis** – Identify the gracilis muscle. This muscle is the most medial of the muscles in the medial compartment. The gracilis originates from the pubic bone and inserts on the tibia just anterior to the attachments of the medial hamstring muscles.

D. **Sartorius** – Identify the distal portion of the sartorius muscle as it inserts on the tibia anterior to the insertion of the gracilis muscle.

E. **Adductor magnus** – Identify the adductor magnus muscle (the largest muscle of the medial adductor group) deep to the semimembranosus muscle. Identify the **adductor hiatus**, an opening in the distal attachment of the adductor magnus muscle, which transmits the femoral artery and femoral vein. After passing through the adductor hiatus, these vessels become the popliteal artery and popliteal vein.

V. VESSEL IDENTIFICATION

**Superficial Veins**

A. **Small saphenous vein** (Previously mentioned) - Identify the small saphenous vein as it enters the popliteal fossa from the leg region.

B. **Great saphenous vein** – Identify the great saphenous vein on the medial side of the thigh.

**Deep Vein**

C. **Popliteal vein** – Identify the popliteal vein (the continuation of the femoral vein distal to the adductor hiatus) as it emerges from the adductor hiatus. The popliteal vein is deep to the popliteal artery as it passes through the popliteal fossa.

**Artery**

D. **Popliteal artery** – Identify the popliteal artery (the continuation of the femoral artery) as it emerges from the adductor hiatus. The popliteal artery is superficial to the popliteal vein as it passes through the popliteal fossa.

VI. NERVE IDENTIFICATION

A. **Sciatic nerve** – Identify the sciatic nerve as it enters the posterior thigh from the gluteal region. Follow the nerve deep to the hamstring muscle until it separates into the common fibular (peroneal) nerve and the tibial nerve. The sciatic nerve is actually the common fibular nerve and the tibial nerve combined inside a connective sheath.

B. **Common fibular (peroneal) nerve** – Identify the common fibular nerve as it separates from the tibial nerve proximal to the popliteal fossa. Follow the course of the common fibular nerve as it passes laterally to curve around the head of the fibula.

C. **Tibial nerve** – Identify the tibial nerve as it separates from the common fibular nerve proximal to the popliteal fossa. Follow the course of this nerve as it enters the posterior portion of the leg region.