

All three heads of the triceps brachii insert in common upon the olecranon process of the ulna, and act together to extend the forelimb at the elbow.

The Lower Foreleg:

On the lateral surface, a group of thin muscle bands may be separated on the lower foreleg. These are extensors of the foot and digits. They include the following muscles:

Extensor Carpi Radialis

Extensor Digitorum Communis

Extensor Carpi Ulnaris

Extensor Digitorum Lateralis

The origin of these muscles is in the distal portion of the humerus and the proximal portion of the radius and ulna. Their insertions are upon the digits or the metacarpal bones.

These muscles are best seen in the close-up view, p. 33.

Hip and Thigh:

Examine the lateral muscles of the hip and thigh. These can best be seen in the photo, p. 34.

Tensor Fasciae Latae — This muscle arises from the crest of the ilium. As its name indicates it “tenses” or pulls upon the *fascia lata*, a white sheet of fascia near the knee and over the tibia which serves as its insertion. Thus, in addition to tensing the fascia lata, the muscle also acts to flex the hip and extend the knee.

Gluteus Maximus — (*Gluteus Superficialis*) — In the pig, this is a relatively small muscle, while in humans it forms the primary tissue of the buttocks. It is a thin muscle which lies upon the hip posterior to the tensor fascia latae. It originates from the last sacral and first caudal vertebrae and inserts into the fascia lata. Action: abductor of the thigh.

Gluteus Medius — This muscle is thicker and narrower than the gluteus maximus. It is also more conspicuous. It lies deep to the gluteus maximus. It originates from the lumbodorsal and gluteal fascia and inserts upon the greater trochanter of the femur. It acts to extend the hip and abduct the hind limb.

The Hamstrings — The following three muscles are collectively known as the hamstrings. The name originates from the practice of butchers who hung hams by the tendons of these muscles. They include the: *Biceps Femoris*, *Semi-tendinosus*, and *Semi-membranosus*.

Biceps Femoris — This very broad, thick muscle covers most of the lateral surface of the thigh. It lies posterior to the tensor fascia latae. It originates from the posterior portions of the sacrum and ischium and inserts by an aponeurosis along the tibia. It retracts the knee, flexes the shank, and abducts the thigh.

Semitendinosus — Although portions of this muscle and the following one may be seen superficially, their major portion is hidden. Bisect the biceps femoris and reflect its ends. Note the *obturator* and *posterior* femoral arteries and the very thick *sciatic nerve*, which innervates many of the hip and leg muscles. Origin: the anterior caudal vertebrae and ilium. Insertion: Proximal end of tibia, the fascia of the leg, and the calcaneus.

Semimembranosus — This is another large muscle of the thigh. It lies posterior and medial to the semitendinosus. It originates on the ischial tuberosity and inserts upon the distal end of the femur and the proximal end of the tibia. It acts to extend the hip and adduct the hind limb. You will again see this muscle when you are dissecting the medial surface of the thigh.

Lower Hindleg:

Gastrocnemius — This is the large muscle of the calf. It originates as two separate heads, the *lateral head* and *medial head*, upon the distal end of the femur. It inserts upon the heel bone, the *calcaneus*, by way of the long, tough, Achilles tendon. It acts as an extensor of the ankle.

Soleus — This muscle lies deep to the gastrocnemius. It originates upon the fibula and inserts together with the gastrocnemius upon the calcaneus by way of the Achilles tendon. Thus, the Achilles tendon serves both muscles. Action: to extend the ankle or to flex the knee.