Q10 – Hamstring Muscles

Definition Note

The hamstring muscles are a group of muscles located in the posterior compartment of the thigh. They extend the hip joint and flex the knee joint. These muscles arise mainly from the ischial tuberosity and are supplied predominantly by the tibial division of the sciatic nerve.

Criteria for Hamstring Muscles

A muscle is considered a true hamstring if it arises from the ischial tuberosity, inserts into bones of the leg, is supplied by the tibial nerve, and acts to extend the hip and flex the knee.

Muscles Included in Hamstring Group

The hamstring muscles include semitendinosus, semimembranosus, and the long head of biceps femoris. The short head of biceps femoris is not a true hamstring muscle because it arises from the femur and is supplied by the common fibular nerve.

Individual Muscles

Semitendinosus arises from the ischial tuberosity and inserts into the medial surface of tibia, producing hip extension, knee flexion, and medial rotation of the leg. Semimembranosus arises from the ischial tuberosity and inserts into the medial condyle of tibia with similar actions. The long head of biceps femoris arises from the ischial tuberosity and inserts into the head of fibula, producing hip extension, knee flexion, and lateral rotation of the leg.

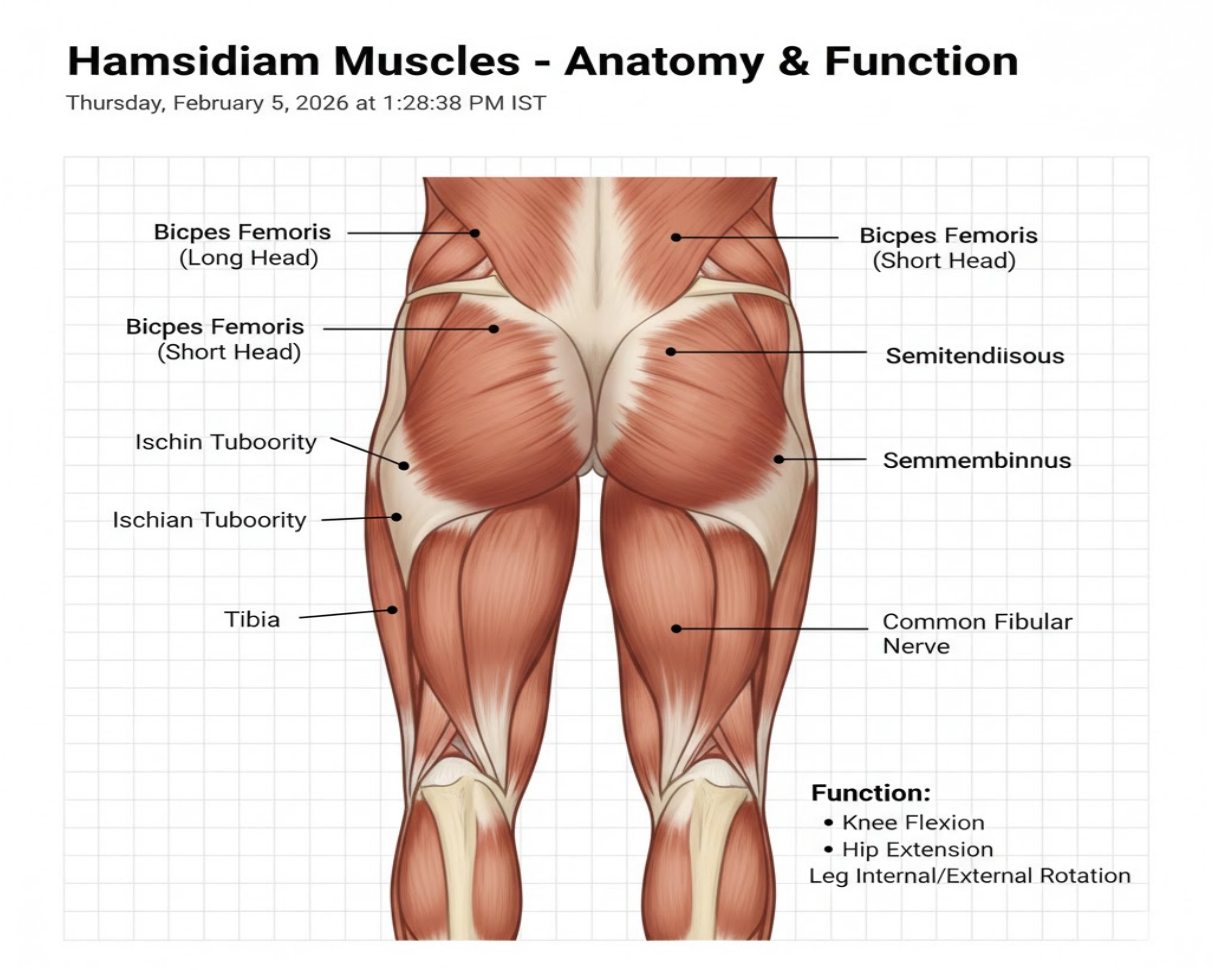
Nerve and Blood Supply

The hamstring muscles are supplied by the tibial division of the sciatic nerve. Their blood supply is mainly from perforating branches of the profunda femoris artery with contribution from the inferior gluteal artery.

Applied Anatomy

Hamstring strain is common in athletes due to sudden overstretching. Injury to the sciatic nerve leads to weakness of hip extension and knee flexion. Tight hamstrings can affect pelvic posture and gait.

Labeled Diagram – Hamstring Muscles



Conclusion: The hamstring muscles form the main muscular mass of the posterior thigh and play a crucial role in hip extension and knee flexion. Their anatomy and clinical importance make them a frequently examined topic.