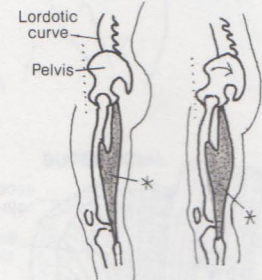


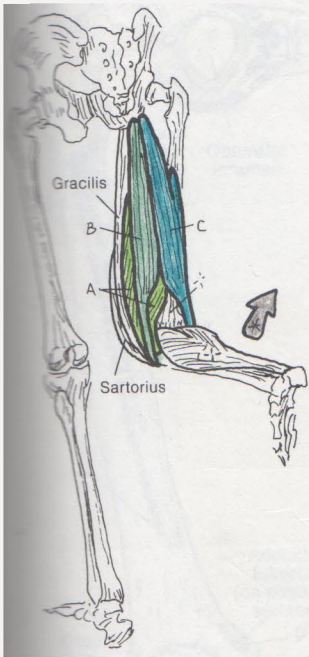
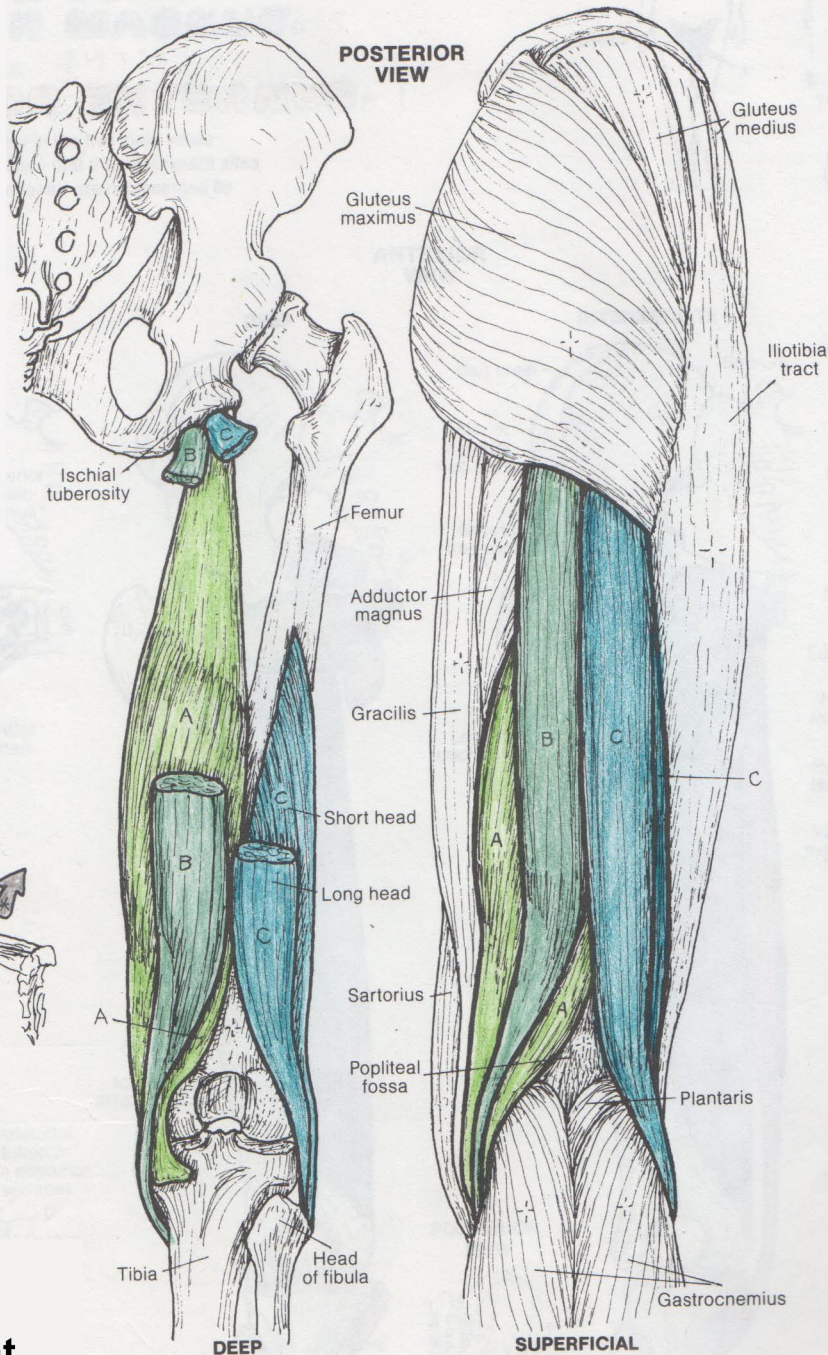
**HAMSTRINGS: SEMIMEMBRANOSUS
SEMITENDINOSUS, BICEPS FEMORIS**



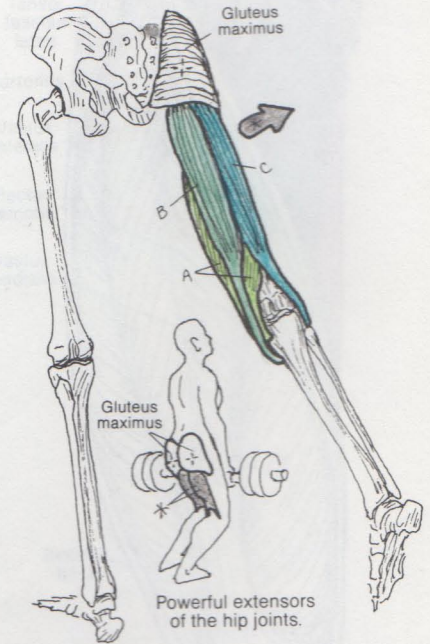
Tight hamstrings limit flexion of hip when knee joint is extended.



Tight hamstrings (at right) tilt pelvis backwards, flattening lordotic curve of lower back.



Flexors of the Knee Joint



Extensors of the Hip Joint

The muscles of the posterior thigh (called hamstrings after a procedure for cutting the tendons of these muscles in certain domestic animals) are equally effective at both extension of the hip joint and flexion of the knee joint; contraction of antagonists can isolate one or the other joint movement. Unlike the hip extensor gluteus maximus, the hamstrings are active during normal walking. In relaxed standing, the hamstrings (and gluteus maximus) are inactive. In knee flexion, the hamstrings act in concert with sartorius, gracilis, and gastrocnemius.

Reduced hamstring stretch ("tight hamstrings") limits hip flexion with the knee extended; flexion of the knee permits increased hip flexion. Try this on yourself. Tight hamstrings, by their ischial origin, pull the posterior pelvis down, lengthening the erector spinae muscles, and flattening the lumbar lordosis, potentially contributing to limitation of lumbar movement and back pain. The long tendons of the hamstrings can be easily felt just above the partially flexed knee.