



Pelvis & Thigh 6

After meeting a stranger, you soon begin to palpate their piriformis muscle (located deep in the posterior buttock). You certainly wouldn't try this in "everyday life," but in patient care settings this level of familiarity is commonplace—and welcomed by a client with a hypercontracted piriformis.

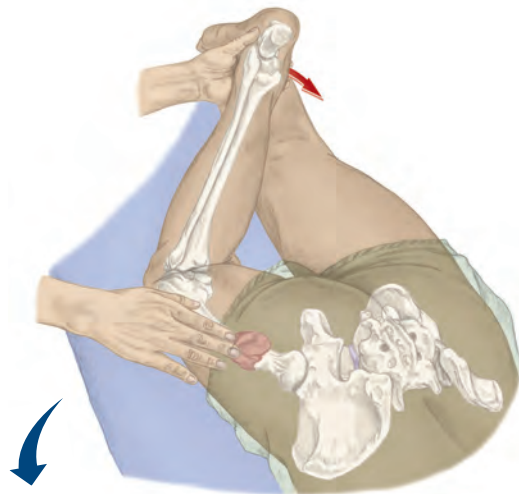
Touch is a unique privilege afforded to health care providers. As such, we need to be mindful of the trust our clients have in us. One way to insure this is through good communication skills. For instance, working the adductors and gluteal region requires a practitioner to provide ample explanation as to the rationale, need, and goals of working these intimate areas of the body. This chapter might pose new challenges for you, as we will be palpating structures close to intimate areas.

Before proceeding, consider the following questions:

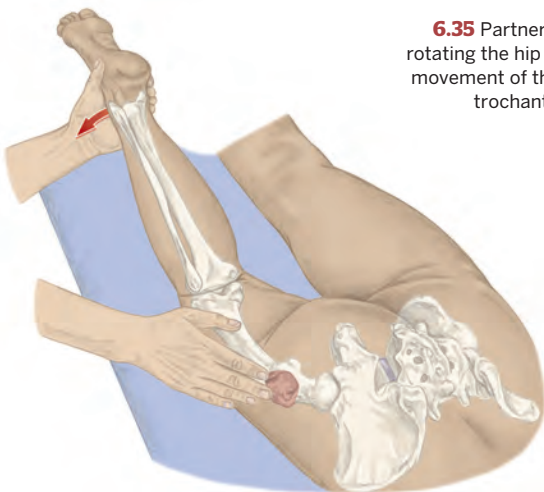
- ◆ Have you ever been anxious to undergo a physical exam? Was there anything the practitioner did or could have done to alleviate this anxiety? Consider multiple elements, including both verbal and nonverbal communication, draping, physical pressure, and pace.
- ◆ Tissues and landmarks found in the pelvis and thigh tend to be significantly larger than those discussed in previous chapters. How might your palpation techniques need to change?
- ◆ Also, how might you properly and comfortably position your patient to access structures needing to be palpated. What pillows, bolsters, or other items could you use at your home, school, or clinic?

Topographical Views	276
Exploring the Skin and Fascia	277
Bones of the Pelvis and Thigh	278
Bony Landmarks of the Pelvis and Thigh	279
Overview: Bony Landmark Trails	284
Overview: Muscles of the Pelvis and Thigh	296
Synergists—Muscles Working Together	302
Muscles of the Pelvis and Thigh	306
Ligaments and Other Structures of the Pelvis and Thigh	336

Trail 4 Hip Hike



6.35 Partner prone, rotating the hip to feel the movement of the greater trochanter




Greater Trochanter

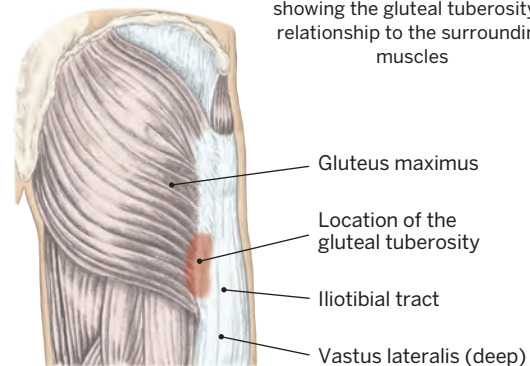
(Refer to p. 287 for more information.)

Greater trochanter

1. Partner prone. Locate the middle of the iliac crest.
2. Slide your fingerpads distally four or five inches along the side of the thigh. There you will feel the superficial hump of the greater trochanter.
3. Sculpt around its two-inch-wide surface and explore all of its sides.

 Holding the ankle, flex the knee to 90°. As your proximal hand palpates the greater trochanter, use the other hand to medially and laterally rotate the hip (6.35). Do you feel the trochanter swivel back and forth under your fingers?

6.36 Posterior view of pelvis, showing the gluteal tuberosity's relationship to the surrounding muscles




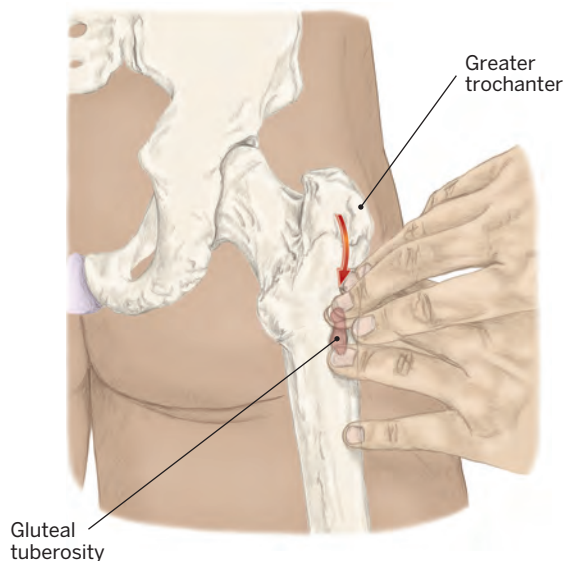
Gluteal Tuberosity

The gluteal tuberosity is located distal to the posterior surface of the greater trochanter. It is a small ridge serving as an attachment site for the lower fibers of the gluteus maximus muscle. Although it is surrounded by the gluteus maximus tendon and the upper fibers of the vastus lateralis muscles (6.36), the gluteal tuberosity is relatively superficial and accessible.

Gluteal tuberosity

1. Partner prone. Locate the posterior surface of the greater trochanter.
2. Slide one or two inches distally along the posterior shaft of the femur until you feel the solid surface of the tuberosity (6.37). It might feel not like a ridge but more like a flat, superficial portion of bone.

 Can you press into the area you are palpating and feel the superficial surface of the femur? Are you directly lateral to the ischial tuberosity (p. 287)?



6.37 Posterior view

Gluteals ▶

Gluteus Maximus, Medius, and Minimus

The three gluteal muscles are located in the buttock region, deep to the surrounding adipose tissue. The large, superficial **gluteus maximus** is the most posterior of the group and has fibers that run diagonally across the buttock (6.79).

The **gluteus medius** is located on the lateral side of the hip and is also superficial, except for the posterior portion which is deep to the maximus (6.80). Both the gluteus

maximus and medius are strong extensors and abductors of the hip. With its convergent fibers that pull the femur in multiple directions, the gluteus medius could be thought of as the “deltoid muscle of the coxal joint.”

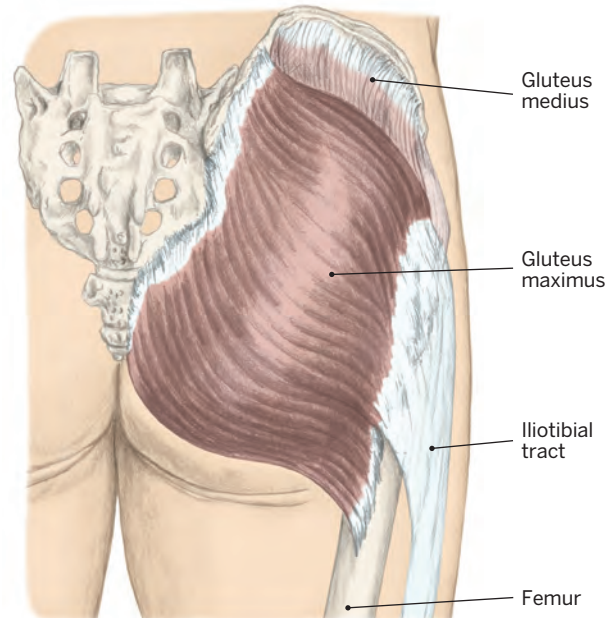
The **gluteus minimus** lies deep to the gluteus medius and is inaccessible; however, its dense fibers can be felt beneath the medius (6.81). Because it attaches to the anterior surface of the greater trochanter, the gluteus minimus flexes and medially rotates the hip, thus performing the opposite actions of the gluteus maximus.

Gluteus Maximus

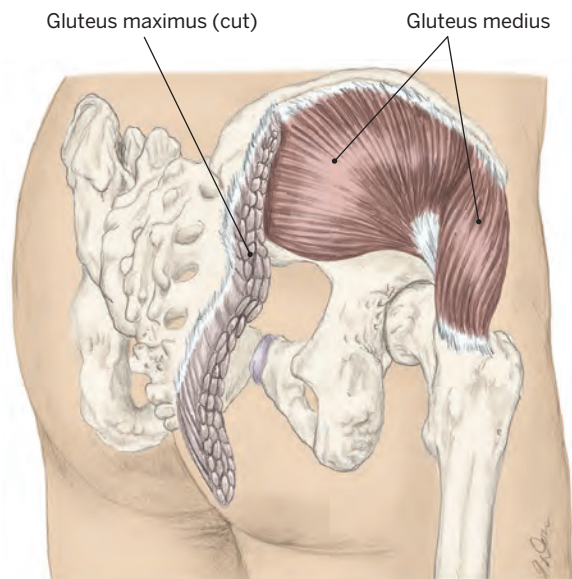
A	<p>All fibers: Extend the hip (coxal joint) Laterally rotate the hip (coxal joint) Abduct the hip (coxal joint) Lower fibers: Adduct the hip (coxal joint)</p>
O	Coccyx, edge of sacrum, posterior iliac crest, sacrotuberous and sacrospinous ligaments
I	Iliotibial tract (upper fibers) and gluteal tuberosity (lower fibers)
N	Inferior gluteal L5, S1, 2

Gluteus Medius

A	<p>All fibers: Abduct the hip (coxal joint) Anterior fibers: Flex the hip (coxal joint) Medially rotate the hip (coxal joint) Posterior fibers: Extend the hip (coxal joint) Laterally rotate the hip (coxal joint)</p>
O	Gluteal surface of ilium, between posterior and anterior gluteal lines, just below the iliac crest
I	Lateral aspect of greater trochanter
N	Superior gluteal L4, 5, S1



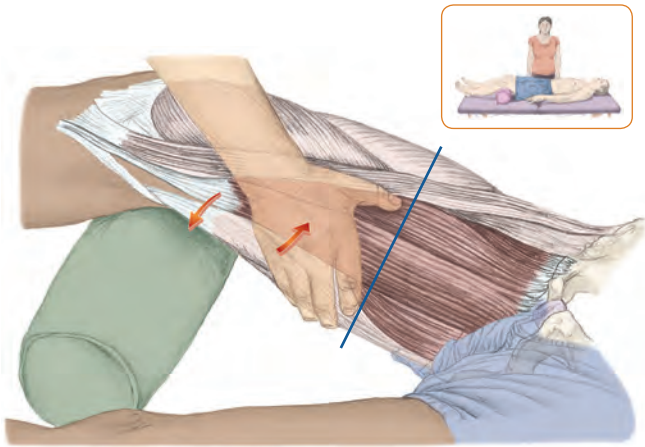
6.79 Posterior view of right buttock



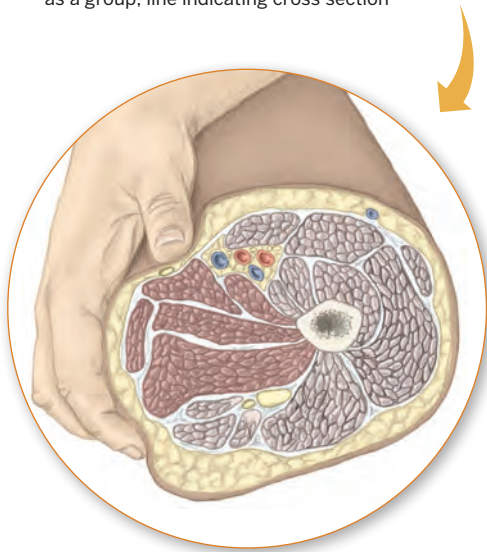
6.80 Posterior/lateral view of right buttock

gluteus *gloo-te-us*

Grk. *gloutos*, buttocks, which in turn is Anglo-Saxon for *buttuc*, meaning end



6.97 Partner supine, palpating the adductors as a group, line indicating cross section



6.98 Inferior view, cross section of right thigh, grasping the highlighted adductors

Adductors as a group

1. Partner supine with the hip slightly flexed and laterally rotated. Place your hand along the medial thigh and ask your partner to adduct his hip against your resistance (6.97). Do you feel the adductors tighten?
2. Ask your partner to alternately adduct and relax as you palpate proximally to the adductor tendons. Then move distally, exploring anterior and posterior to the edges of the adductor bellies.

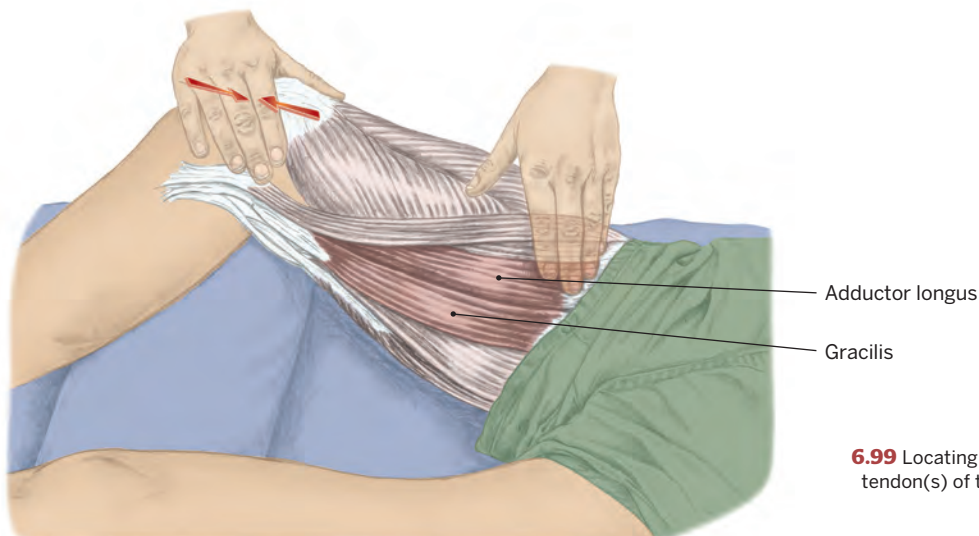
Are you on the medial side of the thigh? Explore either side of the adductors to determine if you are between the hamstrings and quadriceps femoris group (6.98). You should be.

Gracilis and adductor longus

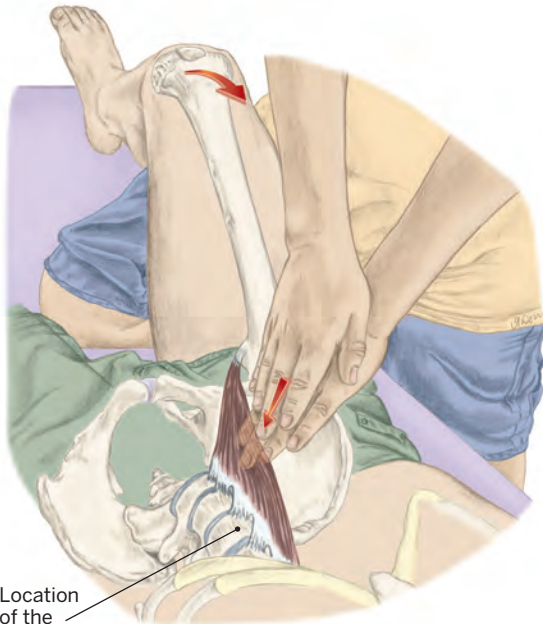
1. Partner supine with the hip slightly flexed and laterally rotated. Place the flat of your hand at the middle of the medial thigh. Ask your partner to adduct his hip slightly.
2. While your partner contracts, slide your fingers proximally to the pubic bone and locate the taut, prominent tendon(s) of the gracilis and adductor longus extending off of (or near) the pubic tubercle.
3. Strum your fingertip across this tendon and follow it distally as it develops into muscle tissue (6.99). If the muscle belly slowly angles into the medial thigh, you are palpating adductor longus. If the belly is slender and continues down the medial thigh toward the knee, you are accessing gracilis.

The shape and location of the sartorius (p. 326) are similar to the shape and location of the gracilis.

Distinguish between the two by simply following the muscle you are palpating proximally. If it leads toward the ASIS, it is the sartorius; if toward the pubis, the muscle is the gracilis.



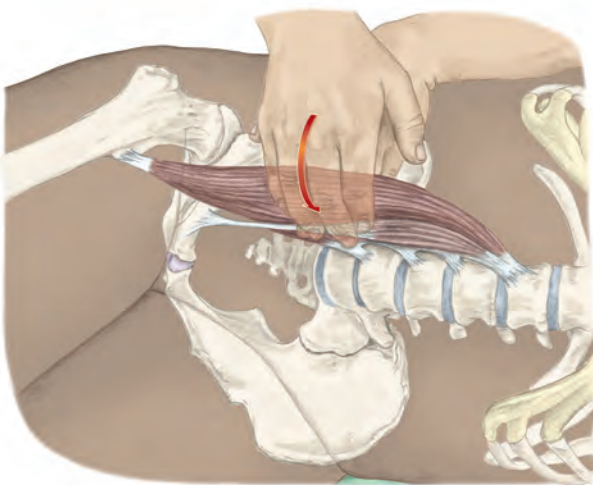
6.99 Locating the prominent tendon(s) of the adductors



Location of the umbilicus

6.131 Partner supine, accessing the psoas while your partner flexes his hip

Psoas major primarily flexes the hip. But when the femur is stabilized, the psoas, in conjunction with iliacus, can increase the lordotic curvature in the lumbar spine and create anterior tilt (downward rotation) of the pelvis. It has also been theorized that only the superficial fibers of the psoas increase the lordotic curve, whereas the deeper fibers may decrease it.




6.132 Partner side lying with hips flexed, curling your fingers into the abdomen


Psoas major

When accessing either the psoas or iliacus, palpate slowly and communicate with your partner. If at any point he does not feel comfortable or safe, slowly remove your hands. The psoas major lies just lateral to the abdominal aorta (p. 219). If you feel a strong pulse directly beneath your fingers when accessing the muscle, realign them more laterally.

1. Partner supine, with the hip slightly flexed and laterally rotated. Support your partner's thigh by placing your thigh underneath it. Locate the navel and ASIS, placing your fingerpads hand-on-hand between these points.
2. Slowly compress your fingerpads into the abdomen, moving only when your partner exhales (6.131). (Compressing in small circles upon your partner's initial exhalations will assist in moving the abdominal contents to the side.) As you compress further, keep your fingerpads stationary and direct your fingers downward toward the table.
3. Check that you are palpating the psoas, not the surrounding tissues, by asking your partner to flex his hip ever so slightly. If your fingers are accessing the psoas, you will feel a definite, solid contraction (6.131).

 Are you between the ASIS and navel? Is the direction of your fingers at a slight angle toward the spine? Have you compressed slowly, allowing the overlying tissue to relax? If you did not feel the muscle contract, try again with the fingers repositioned farther inferiorly.



 Side lying position allows the abdominal contents to shift away from the psoas and, oftentimes, offers a less invasive position for your partner.

1. With the hips in a flexed position, place a bolster between your partner's knees. Locate the navel and ASIS, placing your fingerpads hand-on-hand between these points (6.132).
2. Following your partner's breath, curl your fingers into the abdomen and onto the surface of the psoas. Ask your partner to flex his hip slightly so you can feel for the psoas's contraction.