Self-Tests of the Hip

See red high-lighted questions for Self-Tests

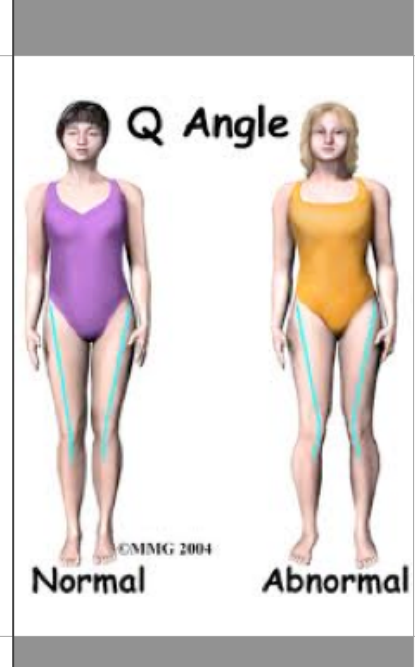
The hip assessment gives you an understanding of postural alignment, range of motion, stability, strength, and function of the hip. Issues with any on of these could impact lower and upper body function. Exercises and strategies will be included to help restore and/or maintain hip health. If you have pain talk to your doctor. Many of these tests you can do on yourself.

Posture/Stability and Hip Health

Do you have normal hip posture? Look at your knee and hip alignment (Q angle). Do you have the same leg length?

Q Angle/Genu Varum and Varus

The Q angle is formed from the 2 lines that bisects the knee. One line is from the tibia tuberosity to the mid-point of the patella. The other line is from the pelvis to the mid-point of the patella. Large Q angles increases stress at the hips and knee. Genu Varum and Valgus are the technical names for bow legged and knocked knees, both of which can place stress at the knee and hip. **Do you have a large Q angle?**



Leg Length Discrepancies

Significant limb length discrepancies (greater than 1.5cm) may be associated with a variety of chronic conditions. Leg lengths are measured from the anterior superior iliac spine to the medial malleolus from a trained professional. You can try this measure on your own, but I would seek professional help if you suspect a leg length discrepancy. Typically, if limb length difference appears to be a contributing factor, half of the recorded discrepancy should be corrected in the course of conservative treatment according to JTW Byrd. Treatment with an insert is more acceptable than a built-up shoe, but talk to your physician. Some clinicians feel that limb length is not important (see article), again this is something you should talk to your doctor about. Lying down have some one observe if one leg is longer than the other. **Do you have a leg length discrepancy?**

Thigh Circumference

Thigh circumference may reflect chronic conditions and muscle atrophy. Always measure at maximum circumference point of thigh making sure tape is parallel to floor. **Are your thighs somewhat the same size?**

Trendelenburg Test

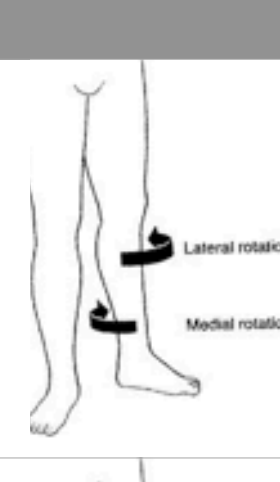
Looking in the mirror stand on the test leg, lifting the other leg off of the ground. With normal abductor strength, the pelvis should remain level. However, as illustrated here, with abductor weakness, the pelvis drops towards to contralateral side, reflecting a positive Trendelenburg test.+ Sign HIP ABDUCTOR WEAKNESS. **Does your hip drop when you do this?**

Flexibility and Hip Health

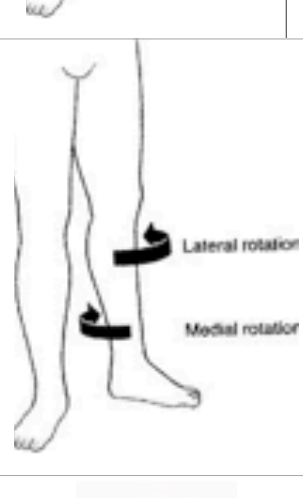
Muscle Tightness – Tightness in the hip muscles can place increased stress on the femur and pelvis during walking and running. Compare your flexibility on each leg. A lack of or too much flexibility may impact hip heath. If an area is found to be too tight stretch that area. If an area is too flexible strengthen that area. There should also be balance between the right and left sides of your body in terms of strength and flexibility. Both sides should be about the same.

Normal Lower Body Range of Motions

Medial hip rotation 35-45° - **When standing you should be able to twist your straight leg 35 to 45 degrees inward. Can you do this?**



Lateral hip rotation-35-45° - **When standing you should be able to twist your straight leg 35 to 45 degrees outward. Can you do this?**



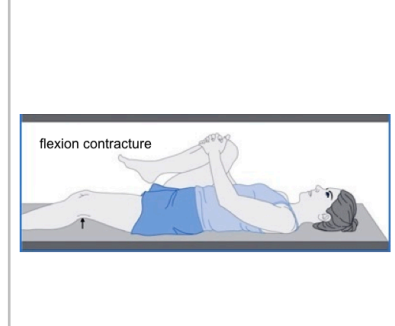
Quadriceps-10 ° from buttock while standing - **When standing you should be able to bring your ankle up to buttocks close to touching it. Can you do this?**

Hamstrings-70 ° hip flexion, supine - **When on the floor you should be able to bring your leg straight upwards 70 degrees. Can you do this?**

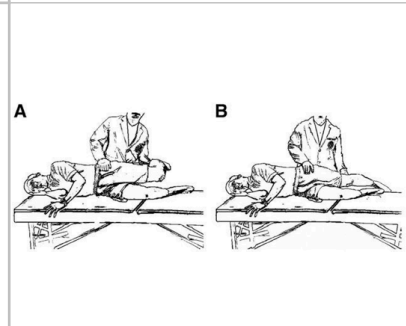
Gluteals-right-seated-tibia (shin bone) 30° to close parallel to floor - **When seated and having ankle on top of opposite knee your shin should be parallel or 30 degrees from floor. Can you do this?**

Inner Thigh-right-tibia parallel to floor - **When seated and having ankle on top of opposite knee you should be able to press with your hand and make your shin parallel with the floor. Can you do this?**

Hip Flexors - **When on the floor you should be able to bring one bent knee into chest without the opposite straight leg being raised off floor. Can you do this?**



IT Band-right (Ober Test) - **When side lying on the floor and having your pelvis kept perpendicular to floor your top leg should drop down and easily touch your other knee. Can you do this?**



Movement and Hip Health

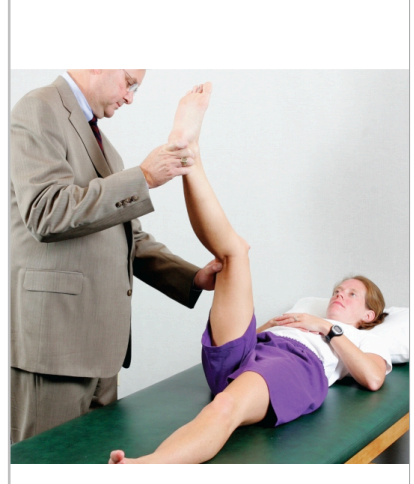
Hip mobility refers to the movement around a joint. Having a full range of motion means you have healthy joints. However, if you have difficulty with your range of motion, it could indicate an underlying problem or be the result of an injury.

General Range of Motion of the Hip

Supine, with the hip flexed 90°, the hip is maximally rotated internally and externally normal 35-45 degrees with no pain, When pressure applied and pain is produced it could be a sign of degeneration.+ Sign Pain **Did you have normal motion and no pain?**

Passive Straight Leg Raise (SLR) Test

The classic straight leg raise (SLR) test is performed to assess tension signs of lumbar nerve root irritation. A positive interpretation is characterized by reproduction of radiating pain along a dermatomal distribution of the lower extremity. The SLR may also re-create local joint symptoms or discomfort in stretching of the hamstring tendons. Somewhat passively moves your straight leg into hip flexion. + Sign NERVE IRRITATION or HAMSTRING TIGHTNESS. **Did you have nerve irritation or hamstring tightness?**

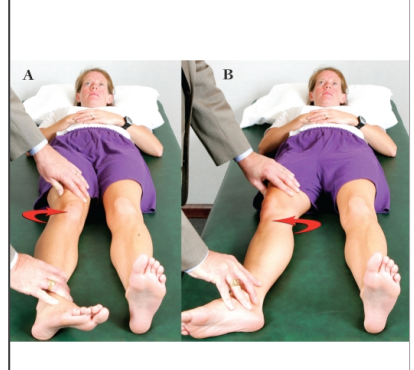


Active Straight Leg Raise Test -

An active straight leg raise, or especially a leg raise against resistance, generates compressive forces of multiple times body weight across the hip joint. Consequently, this movement is often painful, especially when there is even a mild degree of underlying degenerative disease. + Sign DEGENERATIVE DISEASE Try this on yourself. **Did you have pain?**

The Log Roll Test

The log roll test is the single most specific test for hip pathology according to TW Byrd. While supine, gently have the thigh internally and externally by someone, which moves the articular surface of the femoral head in relation to the acetabulum, but does not stress any of the surrounding extra-articular structures. + Sign HIP PATHOLOGY (single best test according to TW Byrd) **Did you have pain?**



Forced Flexion Combined with Internal Rotation advanced test done by athletic trainer or therapist

Forced flexion combined with internal rotation is a more sensitive maneuver which may elicit symptoms associated with even subtle hip pathology. This test is often referred to as an "impingement test" eliciting symptoms associated with femoro-acetabular impingement. However, this maneuver is usually uncomfortable with any irritable hip and is not specific for the nature of the pathology. An accompanying pop or click may be present, but it is more important to determine if this maneuver reproduces the type of hip pain that the patient experiences with activities. This maneuver may normally be uncomfortable, so it is important to compare the response on the symptomatic and asymptomatic sides. Alternatively, forced abduction with external rotation will sometimes produce symptoms. Forced flexion combined with internal rotation is often very uncomfortable and will usually elicit symptoms associated with even subtle degrees of hip pathology. + Sign HIP PATHOLOGY

FABER Test advanced test done by athletic trainer or therapist

While supine, the Patrick (or Faber) test is performed by crossing the ankle over the front of the contralateral knee and then forcing the knee of the involved extremity down on the table. This combination of flexion, abduction, and external rotation stresses the SI joint and when injury or inflammation is present, it markedly enhances symptoms localized to the SI area. This same maneuver can irritate the hip joint as well, but with distin ctly different localization of symptoms. + SI JOINT or HIP PATHOLOGY

Snapping Hip advanced test done by athletic trainer or therapist

While lying on your side, snapping of the iliotibial band can sometimes be elicited with flexion and extension of the hip. Good generalizations exist regarding snapping hip syndromes. If you can hear it from across the room it is the iliopsoas tendon, and if you can see it from across the room it is the iliotibial band.

Strength and Hip Health

Hip strength and stability is important for everyone especially athletes. Athletes require to have strong hip muscles that will provide forceful movements in 3 degrees of freedom: flexion/extension, abduction/adduction, and internal rotation/external rotation. It is also important that these muscles are strong to stabilize the pelvis, which will allow a stable foundation for lower extremity kinetic chain movements. An unstable hip can cause serial distortion patterns, which are predictable patterns of dysfunction throughout the kinetic chain that lead to inevitable injuries (see more).

Gluteal Bridge

By doing a single leg gluteal bridge exercise you can check the stability of your pelvis. During this motion your torso is supported by your hip abductor and external rotator muscles. In strong subjects the pelvis will barely move when you lift up one leg. But in individuals with hip strength deficits, there will be a marked "dip," with the pelvis tilting down on the unsupported side. This is easy to spot by yourself, but can also be confirmed by an observer. When performing this test determine if there is a difference between sides. Difference in sides should be addressed. An adequate number of single leg bridges is 10 reps. **Were you able to perform an adequate amount of side bridges and was both sides fairly the same?**

Single Leg Squat

By doing a single leg squat you can evaluate the coordination of your hip stabilizer muscles during a dynamic activity. Try do to 1-5 single-leg, half squats, being sure to keep your torso upright and your knee about even with your toes. While you are doing these squats, glance down at your knee. Is it pointing straight ahead, or is it buckled or rotated inward? If your hip stabilizers are weak, or if they simple aren't very well coordinated, you'll find these single leg squats quite difficult to do without allowing your knee to wobble around or buckle inward. **Were you able to perform a several single leg squat adequately with both sides being the same?**

Manual Hip Strength Tests

Manual muscle testing is done by therapists and athletic trainers to assess strength, sensation, and stability. Grading Scale Range: 0 to 5. 0, None; No visible or palpable contraction. 1. Trace; Visible or palpable contraction with no motion. 2. Poor; Full ROM gravity eliminated. 3. Fair; Full ROM against gravity. 4. Good; Full ROM against gravity, moderate resistance. 5. Normal; Full ROM against gravity, maximal resistance. Right=R, Left=L

Hip Abduction

The subject is side lying with test leg uppermost. The trainer stands behind the subject and stabilizes with one hand at the hip. This hand is proximal to the greater trochanter. The other hand applies resistance across the lateral surface of the knee. Subject abducts hip against downward resistance.

Hip Adduction

The subject is side lying with the test leg lowermost and resting on the table. The uppermost leg is abducted to 25 degrees and supported by the examiner. The trainer stands behind the subject at the knee level. The resistance hand is placed on the distal medial femur of the test leg. Resistance is applied in a downward motion while the subject actively adducts.

Hip Flexion

The subject is short sitting with thighs fully supported and legs hanging over the edge. The trainer stands next to the test leg. The trainer places one hand on the distal thigh and proximal knee, and applies resistance in a downward direction as the subject actively flexes at the hip

Hip Extension

The subject lies prone on the table. The trainer stands on the side of the test leg, at pelvis level. One hand stabilizes the pelvis, and the other hand is placed on the distal calf. The hand on the distal calf applies resistance in a downward direction ad the subject actively extends at the hip. Determine if there is Gluteal Amnesia. that is where the gluteal muscle do not activate as much as the hamstrings.

Hip Internal Rotation

The subject is short sitting. The trainer sits on a stool or kneels beside subject. The trainer places one hand at the medial aspect of the distal thigh and applies resistance in a lateral direction. The other hand grasps the lateral ankle just above the malleolus, and applies resistance in a medial direction. The subject is actively internally rotating at the hip.

Hip External Rotation

The subject is short sitting. The trainer sits on a stool or kneels beside subject. The trainer places one hand at the lateral aspect of the distal thigh and applies resistance in a medial direction. The other hand grasps the medial ankle just above the malleolus, and applies resistance in a lateral direction. The subject is actively externally rotating at the hip.