“Butt I Forgot!”

Aquatic Therapy implications and treatment approaches for **GLUTEAL AMNESIA**.
Beth Scalone, PT, DPT, OCS, ATRIC

The gluteal muscles are usually strong and functionally important. Inhibition or delayed onset of these muscles is the root cause of many injuries and pain in the back, hips, knees and ankles. Functional rehabilitation of the spine and lower extremity includes interventions to strengthen these essential muscles.

The role the muscles around the hip play depends on the activity being performed. The “text book” definition is primary muscle action and describes the muscle in isolation and in a non-weight bearing position. For example the gluteus maximus performs hip extension with the gluteus medius being a hip abductor and external rotator.

In function, especially closed chain activities, these muscles work together with other muscles to stabilize, control and move the body in all three planes. The gluteus maximus eccentrically decelerates hip flexion in the sagittal plane and controls internal rotation of the femur along with the gluteal medius in the transverse plane. The gluteus medius plays a primary role in controlling lateral translation of the hip and pelvis in the frontal plane to the same side of the body. When these muscles fail and the pelvis drops on the opposite side during single leg stance it is often described as a positive trendelenburg. Lack of femoral rotational control translates down the lower extremity chain resulting in internal rotation of the femur, valgus stress at the knee and pronation at the foot and ankle.

These muscles are often inhibited or chronically weak, with associated tightness in the hip flexor from prolonged sitting postures, injury and pain. The term “gluteal amnesia” applies when the glute muscles do not turn on automatically having “forgotten” their role. Without the stabilizing effects of these muscles, faulty movement patterns overtime lead to injury and pain. Common diagnoses linked to gluteal weakness include sacroiliac dysfunction, lower back pain, anterior hip pain, bursitis, patellar femoral pain, ACL injury, ankle sprain and Achilles tendonitis.

**What are the best treatment strategies to address “dead butt syndrome”?**

**Stretch the antagonist.**

In order for the muscles to be able to work effectively the antagonist muscles, mainly hip flexor group and adductor muscles need to have adequate flexibility otherwise it is impossible for the weak extensors and abductors to fight the habitual tightness on the opposite side of the joint.

**Specific Strengthening**

Strengthening should focus on the weaker, posterior portion of the glut medius and gluteal maximus with stabilized control of the other joints, especially the knee and lumbar spine. In open chain exercise, hip abduction is performed with the hip in 5-10 degrees of extension and neutral rotation, making sure the movement is strictly coming from the hip without excessive pelvic side bending. When working hip extension watch for lumbar spine extension as the compensatory movement. To prevent the pelvis from anteriorly rotating and thus extending the lumbar spine, cue abdominal activation prior to the initiation of the hip movement.
Why the pool?

Buoyant support helps individuals too weak or painful to maintain alignment on land to begin learning new movement patterns and strengthen the muscles in functional positions.

When the client is vertical hip flexion is assisted, providing and environment for the client to relax an overworked, tight illopsas muscle during movement. Clinically the client over fires the hip flexors in attempts to stabilize the lower back when abdominal weakness is present. Cuing the client to relax the front of the hip and pull the belly button in towards the spine will reduce unwanted tension in the front of the hip.

The following are examples of Pool Exercises utilized to facilities gluteus muscles.

Stretches:

- Quad and hip flexor with noodle

- Lunge forward/ dynamic hip flexor stretch of the back leg

Strengthening

- Standing hip abduction, keep pelvis stable
- Standing hip extension, keep abdominals engaged
- Abduction with extension and ER to focus on posterior glut med fibers

Isometric hip abduction pool side with trunk stabilization:
With hip in neutral and knee flexed at 90, press leg closest to the wall, into the wall, stabilize with the stance leg, do not lean into the wall with your body

- Single leg stance activities focus on stance leg
- Hip hikes
- Step ups
- Side stepping (can increase resistance with tubing)

Closed chain ER: standing on one leg, keeping the kneecap lined up with the foot, squeeze the deep external rotators of the stance leg resulting in pelvic rotation away and external rotation of the stance leg.
Side planks with hip abduction

Plank with hip extension and abduction
  More advanced with plank on noodle

Glut press downs: hip and knee flex/extension with noodle under foot and in ER