

Preventing & Healing Injury in Asana: Acetabular Labral Tears



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By Elaine Y. Goodall

Acetabular Labral Tears

Anterior hip and groin pain are common complaints in many athletic activities. This pain is often attributed to iliopsoas (hip flexor) bursitis, or to muscle strains, tendonitis, stress fractures, arthritis, or nerve entrapments. However, there is growing concern and evidence that people with anterior groin and hip pain who do not respond to conservative treatment may in fact have a tear of the acetabular labrum of the hip joint.¹

Dancers and gymnasts may have a predisposition to developing labral tears, because they commonly have an incongruity of the hip joint that allows the excessive flexibility required for these activities. For the same reason, certain Yoga practitioners (especially those drawn to practices requiring extreme flexibility) may also be at risk for acetabular labral tears.

Understanding the causes of acetabular labral tears can help us design and teach *asana* practices that reduce the risk of this injury. We should also be aware that students with unexplained chronic hip pain may have an acetabular tear, and encourage them to seek appropriate medical diagnosis and treatment.

Anatomy of the Hip Joint

The hip joint is the largest ball-and-socket joint in the body, and it is also one of the most stable joints. Its stability comes from the joint's deep socket, called the acetabulum, and the thick, dense ligaments that connect the pelvis and femur. A negative pressure system of fluid dynamics also contributes to joint stability.

The labrum itself is a ring of fibrocartilage that sits inside, and attaches to, the acetabulum. The function of the labrum is not widely understood; however, it appears to increase joint stability by both deepening the socket and increasing its shock absorbing qualities. In this regard, it is similar to the meniscus in the knee. The labrum also reduces contact forces between the acetabulum and the femoral head by increasing the contact surface area, thus distributing forces over a larger area. It also helps to contain the femoral head in extremes of motion, especially flexion.¹ It also equalizes joint fluid pressures and provides a seal to the joint.

If there is a tear and the seal is broken, there is a greater likelihood of wear and tear to the cartilage of both the acetabulum and the femoral head, which can ultimately lead to arthritis.

Symptoms of Injury

The labrum has a variety of nerve endings for pain, pressure, and deep sensation, indicating that a tear of the tissue could be a

source of hip pain. The most common and consistent symptom is a chronic, painful, and sometimes audible clicking sensation in the anterior hip or groin, as most of the tears are in this region. If the tear is posterior, there may be buttock pain.

Labral tears typically produce a deep pain with a sense of catching or giving way. Labral tears can be confused with the more common and less serious problem known as the "snapping hip syndrome," which happens outside, not inside, the joint. There may be a loss of range of motion in either external or internal rotation or adduction. Night pain is another common symptom. Students may report that even turning over in bed is painful.

Pain may subside with rest, but frequently returns with *asana* practice. Since the labrum is avascular, meaning that it has a poor blood supply, it does not heal easily once it is damaged.

Mechanism of Injury

There are many causes of labral tears, including high impact or direct trauma, such as a fall, or micro-trauma from overuse. Movements that require repetitive hyperextension or flexion of the hip, extreme external rotation (ER) or internal rotation (IR) of the femur, twisting motions, or any combination of these movements can injure the labrum. Clearly these are the movement patterns of Yoga *asanas*. Students with intense daily practices who must always "work at the edge" of their flexibility, and those who do not vary their practice, may therefore be at risk.

Avoiding Injury

Warming up the body properly with preparatory *asanas* can help prevent injuries. Instructors should teach a balanced practice, with a variety of movements at the hip joint and a focus on both stability and flexibility. Those students who are hyperflexible should be encouraged to practice *asanas* that emphasize strength, support, and stability, rather than additional flexibility.

Suggestions for Students

Often students will ask for suggestions and advice for dealing with injuries. As teachers, we typically encourage students to follow the guidelines provided by their physician, and we recommend conservative measures, such as relative rest from the poses that cause pain or discomfort, and decreasing the intensity or frequency of practice. We may even have to recommend complete rest for a period of time. Many physicians don't understand the physical demands of some Yoga practices, and may not have suggested this beneficial rest.

If you find that students have hip or groin pain in poses and require modifications for an extended period of time, it may provoke your suspicion of a labral problem. Encourage students with persistent pain to seek medical care. In addition, these suggestions may be helpful:

- Modify poses to avoid the extremes of motion. For instance, place pillows under the knees to avoid full external rotation while sitting in a cross-legged pose. Or, avoid cross-legged poses and sit in hero pose on a block.
- Encourage students to perform cobra pose instead of upward facing dog, to reduce strain on the front of the hip, particularly the iliopsoas tendon.

- Limit the depth of the lunge in standing poses such as *virabhadrasana* (warrior). For example, in warrior 1, the back leg is in extension and ER, which causes tension across the front of the hip. A deep lunge of the front leg in warrior 2 puts the hip in a flexion that is frequently painful, because the tissue gets pinched and the joint is not stable.
- Students may have increased pain in standing poses if they try to correct alignment through the hip once the foot is planted on the floor. It may be more comfortable to make small adjustments at the foot and knee rather than adjusting through the hip.
- Students can apply heat for 20 minutes prior to class to help increase the tissue temperature, followed by ice application for 20 minutes after class to help decrease any inflammation. A warm bath with ginger and Epson salts can also bring temporary relief.

If the Pain Persists?

If the pain persists after several weeks of conservative treatment, advise the student to make an appointment with an orthopedic surgeon who is a hip specialist. The physician will order an x-ray and an MRI arthrogram. It must be an MRI arthrogram and not a traditional MRI, which frequently fails to detect these tears. If surgery is indicated, the traditional procedure is an outpatient arthroscopic debridement surgery. Following surgery, weight-bearing is allowed, as comfortably tolerated, and crutches are used for 1-2 weeks as needed.

Practicing Ahimsa


This is an excellent time for students to deepen other Yoga practices, such as *pranayama* and meditation. Students will need psychological and emotional support during the recovery phase. Reminders to practice *ahimsa* are extremely helpful. A slow and gradual return to practice, with an emphasis on restoring strength, endurance, range of motion, balance, and proprioception, usually takes 12-16 weeks from the time of surgery.

Having just gone through this surgery myself, I can attest to the many challenges and frustrations that students will experience. It has been very challenging to be the injured student, as a registered Yoga teacher and an experienced physical therapist. At times, I felt embarrassment and guilt that I had injured myself doing Yoga, and that perhaps I hadn't practiced what I so often preach: "Listen to your body and respect the messages." On the other hand, injuries occur and there is no healing in blame. Stating my intention and practicing *ahimsa* continues to enhance my ability to accept the situation, deepen my understanding of healing, and grow from this experience.

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