

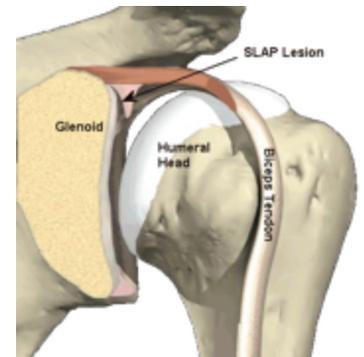
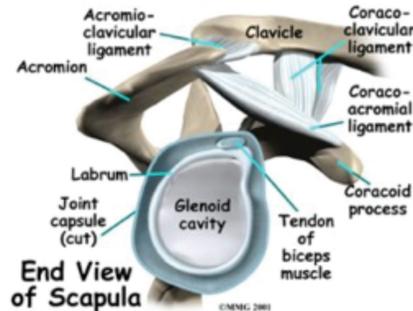
SLAP/Labral Lesion

Shoulder Anatomy

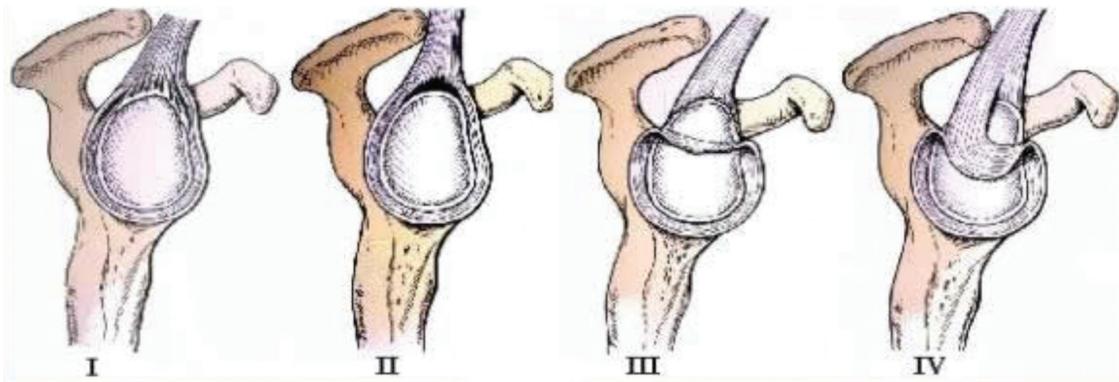
The shoulder joint is formed by the humerus (upper arm) and the glenoid labrum of scapula (shoulder blade). The relative size of these two structures is analogous to a golf ball (head of the humerus) on a golf tee (glenoid). This makes the shoulder joint have a large range of motion and explains why we can put our arms over our heads or scratch the middle of our back.

What are SLAP Lesions?

The shoulder's large, though useful, range of motion can also lead to injuries. One type is the Superior Labrum Anterior to Posterior (SLAP) lesion. The labrum deepens the golf tee to help make the shoulder more stable. The biceps tendon attaches at the top of the labrum. This is the area of the SLAP lesion. The term SLAP lesion is used to describe anatomic lesions of the superior glenoid labrum and biceps anchor.



SLAP lesions are classified into four types based on the anatomic appearance of the tear.



Type I lesions demonstrate fraying and degeneration of the superior labrum with firm attachment of the labrum and biceps to the glenoid. In Type II lesions (most common type), the labrum is frayed and degenerated as in the Type I lesions; however, the labrum and biceps anchor are detached from the superior aspect of the glenoid. The Type III lesion has a bucket handle tear of the labrum with central displacement with an intact biceps anchor. Type IV lesions have bucket handle tear of the labrum with detachment of the biceps anchor.

Causes of SLAP Lesions

One theory about SLAP tears is that they result when the shoulder joint tries to dislocate. When this occurs, the biceps tendon contracts to prevent the dislocation and distracts the glenoid labrum from its origin. As the shoulder “slides back” the head of the humerus clips the distended labrum resulting in a tear.

A second theory centers around repeated stress, such as the repeated stress of overhead throwing. As a baseball player, softball player or quarterback throws the ball, the superior labrum is under high amounts of stress. During the deceleration phase after ball release is when the stress is at its highest.

Symptoms of SLAP Lesions

Symptoms may include:

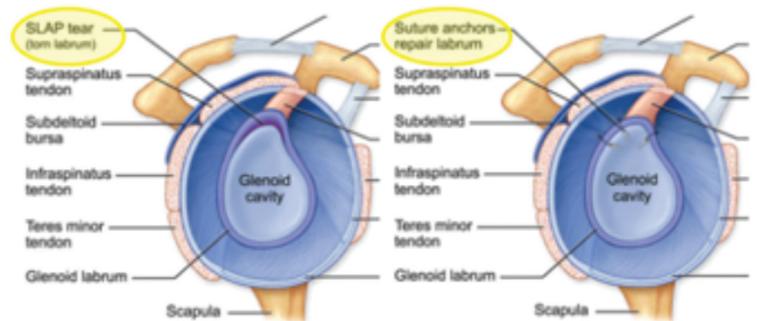
- Pain that worsens with overhead activity
- The sensation of catching, locking or popping in the shoulder
- Dull throbbing ache – brought on by strenuous exertion or simple household chores
- Difficulty sleeping or night pain

Diagnosis of a SLAP Tear

Evaluating this injury can be difficult. One of the most important pieces of the evaluation is the history of the injury:

- Is the athlete a thrower?
- Did he/she feel or hear a “pop” with one specific throw?
- Did they fall on their outstretched arm?
- Has the ability to throw gotten worse?
- Does the shoulder “catch” or “click” during overhead activities?

If the answer to these questions are “yes,” then a SLAP lesion must be considered. A referral to Dr. Gudeman, an orthopedic surgeon who deals with sports injuries, should then be considered. He may use a series of diagnostic tests to determine if the labrum is torn. He may also order a MRI or MRI arthrogram to determine the extent of the injury. Keep in mind that none of these tests may elicit a “positive” result. This is the reason the patient’s history is so important.



They only used 2 sutures for my SLAP Type II repair

Treatment of SLAP Lesions

Once a SLAP is diagnosed, Dr. Gudeman will determine the type of tear at the time of surgery and dictates the surgical repair.

A Type I tear may be repaired by a simple debridement of the worn tissue. Dr. Gudeman must be sure that the biceps tendon is still securely attached to the labrum. Non-operative treatment, such as physical therapy or rehab, may be tried before surgery.

A Type II tear involves the biceps tendon and the labrum. The biceps and labrum are becoming detached from their bed on the glenoid fossa. This injury may be treated by “tacking” the labrum and biceps complex down to the glenoid with biodegradable suture anchors. Biceps tenodesis (release of biceps tendon and then reattach somewhere else in the shoulder) and biceps tenotomy (release of biceps tendon) are other surgical options. Even for Type II slap tears, non-operative treatment (physical therapy or rehab) may be tried before surgery.

A Type III tear is similar to a bucket handle of the meniscus in the knee. The labrum/biceps complex is stable on the glenoid, but a flap of tissue is hanging down into the joint. This is treated with surgical excision of the flap. There is some debate about repair versus excision; some surgeons will repair if the tear involves one third or more of the labrum.

A Type IV tear is complex and involves the labrum and biceps tendon. The labrum presents with a bucket handle type tear that extends into the body of the biceps tendon. The treatment for this complex tear is complex as well. If the biceps tendon/labrum complex is stable on the glenoid, the labral tear will be removed. If the complex is unstable on the glenoid, Dr. Gudeman will use suture anchors to secure the labrum/biceps complex. The biceps tendon will be repaired with suture. Biceps tenodesis and biceps tenotomy are other surgical options (see Type II repair).

Rehabilitation is important as a primary non-operative treatment option or post-op. Rehabilitation will begin the week after surgery and will progress depending on the type of tear and repair that was involved. Formal rehabilitation may last two to three months and a home exercise program will continue several months afterward.

Possible Complications of Surgery for SLAP lesions

There may occasionally be unforeseen complications associated with anesthesia, including respiratory or cardiac malfunction. The surgery itself may be complicated by infection, injury to nerves and blood vessels, fracture, weakness, stiffness or instability of the joint, pain, inability to return to full duties or the need for additional surgeries.

Improvement to the shoulder is determined not only by surgery, but also by your general condition and rehabilitative effort. In many cases, the tendons and muscles of the shoulder have been weakened from prolonged misuse or degeneration, and strengthening them will require a gentle, steady process of changing habitual ways of moving your arm.

Informative Websites

www.orthoinfo.org
www.sportsmed.org
www.aana.org

Helping you achieve the optimal activity level
for your lifestyle is my first priority.

- Scott Gudeman, MD



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