

# What the Experts Have to Say About SLAP Lesions

If you want to know how experts with years of experience treat *SLAP* lesions, this is the article for you. *SLAP* stands for *superior labrum, anterior and posterior*. It refers to a torn rim of fibrous cartilage (the labrum) that edges the shoulder socket. The tear is at the top of the socket (that's what superior means) and goes from the front (anterior) to the back (posterior) of the socket.

The authors (two sports medicine orthopedic surgeons) review how to evaluate and treat *SLAP* lesions. Knowing how the person injured him or herself is the first starting point. Overhead throwing athletes are the most likely people to develop a *SLAP* injury. That's because the position of the arm when the injury occurs is flexion and abduction. This is the position pitchers or overhead throwing athletes are in just before moving the arm forward to release the ball.

The events leading up to the injury can be *traumatic* as in the case of repetitive overhead activity or falling on an outstretched arm. Or it could be *degenerative*. Degenerative *SLAP* lesions are more common in older adults as a result of the aging process. No matter what the cause, when a *SLAP* lesion occurs, the surgeon looks for other accompanying soft tissue injuries as well. This could be a rotator cuff tear, shoulder instability (a tendency to dislocate easily), or both.

There are different types of *SLAP* injuries labeled Type I, Type II, Types III, and Type IV. The exact type depends on whether the labrum is frayed along the edges, partially torn, or completely pulled away from the bone. Sometimes, the biceps tendon, which attaches along the upper front area of the socket is also pulled away. Labral tears may occur with or without biceps tendon disruption, which forms a separate classification or type of *SLAP* lesion. Two additional types (V and VI) have been named to include combined or complex *SLAP* lesions that aren't fully described using I through IV.

Although the surgeon performs an examination of the shoulder and conducts numerous clinical tests, the exact lesion can't be determined without imaging studies and arthroscopic exam. There are numerous tests designed to identify a *SLAP* lesion (e.g., active-compression test, compression-rotation or grind test, Speed's test, the clunk test, the biceps load test and so on). It's not necessary for the surgeon to perform all of these tests. Some are more reliable and sensitive than others.

Four of the more accurate tests are presented in this article. A description of each test along with photos of the examiner performing the test are included. Expected results for a positive response indicating a *SLAP* lesion are provided. The four tests include the (O'Brien) *active-compression test*, the *compression rotation test*, the *pronated load test* (a relatively new test), and the *resisted supination external rotation test*.

MRIs are still considered the *gold standard* in diagnostic imaging for *SLAP* lesions. There is debate about what type to order (contrast vs. noncontrast, type of view). The authors offer their own opinions. They suggest a high-resolution noncontrast MRI coronal sequence. The lesion can be seen as a cleft between the superior labrum and the *glenoid* (shoulder socket). MRI results are important before heading into the operating room. They show the full extent of the damage, which may not be as easily seen during the procedure.

Most *SLAP* lesions require surgery. But for a subgroup of patients with Type I lesions, conservative (nonoperative) care may be successful. This includes change in activity (no more throwing for a while), antiinflammatory drugs, and Physical Therapy. The therapist guides the patient through a process of reducing pain and restoring motion, strength, and normal movement patterns.

Who should have surgery then? The authors' suggest anyone who has not obtained the desired results with conservative care, patients with a SLAP lesion and a major tear of the rotator cuff, and anyone with a large labral tear who has altered biomechanics (movement of the shoulder complex is no longer normal).

What does the surgeon do? Minor labral tears and frayed edges are shaved and/or smoothed back down. This procedure is called debridement. More severe tears are repaired. There are various ways to do the repair. These surgeons describe their method of establishing arthroscopic *portals* (where the needle is inserted into the joint), type and location of sutures and suture anchors, and method for making suture knots. Clear photos of each step are provided. Complex lesions requiring special surgical techniques are also discussed (including rotator cuff tears).

For the patient, the next step is a postoperative rehab program. The exact steps in this process are determined by the type of SLAP lesion, surgery that was done (e.g., debridement versus repair), and how much other damage was present. The postoperative rehab guidelines are provided in an easy-to-use table for the reader. These consist of movement, activities, and exercises performed during each of six phases from immediate post-op up to 24 weeks later. A short description of each phase along with any limited or prohibited motions is included.

What are the results of all this treatment? Well, that's still a little bit up in the air. There aren't very many long-term studies. What we have available so far shows good results in 75 to 90 per cent of the patients. Not everyone gets back to their preinjury level of shoulder function. Athletes who are not involved in overhead throwing seem to have the best chances for recovery.

For best results, the authors recommend a careful examination and accurate diagnosis. Follow-up therapy is essential (they say *mandatory*). Anyone having surgery must be aware of just how important their cooperation and compliance is in following the surgeon's and the Physical Therapist's directions.

Christopher C. Dodson, MD, and David W. Altchek, MD. SLAP Lesions: An Update on Recognition and Treatment. In *The Journal of Orthopaedic & Sports Physical Therapy*. February 2009. Vol. 39. No. 2. Pp. 71-80.