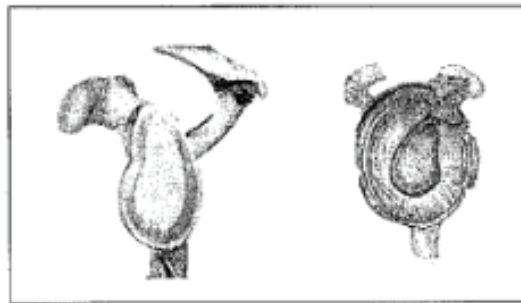


## SHOUDLER PAIN – LABRAL TEARS

### Anatomy:

The shoulder joint involves three bones: the shoulder blade (scapula), the collarbone (clavicle) and the upper arm bone (humerus). The head of the upper arm bone (humeral head) rests in a shallow socket or cup in the shoulder blade called the glenoid. A cartilage rim called the labrum surrounds the socket to help stabilize the joint. The rim deepens the socket so that the head of the upper arm bone fits better, and it serves as an attachment for the ligaments that keep the ball in the socket.



### Injuries:

Injuries to labrum or cartilage rim can occur from acute trauma or repetitive shoulder motion. Examples of traumatic injury include:

- Falling on an outstretched arm
- Direct blow to the shoulder
- Sudden pull, such as when trying to lift a heavy object
- Violent overhead reach, such as when trying to stop a fall or slide

Throwing athletes or weightlifters can experience tears due to repetitive, forceful shoulder motion.

Tears can be located either above (superior) or below (inferior) the middle of the cup or glenoid socket. A SLAP lesion (superior labrum, anterior [front] or posterior [back]) is a tear of the rim above the middle of the socket that may also involve the biceps tendon. A tear of the rim below the middle of the glenoid socket that also involves the inferior ligaments is called a Bankart lesion and usually results from a shoulder dislocation.

### Signs and Symptoms:

It is difficult to diagnose a tear in the shoulder socket rim because the symptoms are very similar to other shoulder injuries. Symptoms include:

- Pain, usually with overhead activities
- Catching, locking, popping or grinding
- Occasional night pain or pain with daily activities
- A sense of instability in the shoulder
- Decreased range of motion (rare)
- Loss of strength

#### Diagnosis:

A careful medical history will often direct us toward the correct diagnosis. One may be able to remember a specific incident or may note that the pain gradually increased. Physical tests to check range of motion, stability and pain responses are used in the office to support suspicion of this pathology, but often time, other, more common problems will need to be ruled out first, such as rotator cuff tears or shoulder impingement. In addition, X-rays are used to see if there are any other reasons for the pain.

Because the rim of the shoulder socket is soft tissue, X-rays will not show damage to it. Special tests such as an MRI (magnetic resonance imaging) are sometimes used to aid in the diagnosis, but most of the time, these are not conclusive. Ultimately the diagnosis will be made with arthroscopic surgery.

#### Treatment:

Until the final diagnosis is made, anti-inflammatory medications and rest to relieve symptoms are commonly prescribed. Rehabilitation exercises to strengthen the rotator cuff muscles may also be recommended. Cortisone shots are sometimes helpful in trying to sort out the other possible causes of the shoulder pain. If these conservative measures are insufficient, arthroscopic surgery is often the next step.

This is almost always done through the arthroscope using three or four small punctures around the shoulder. The ball and socket joint is inspected, along with the cartilage rim that surrounds the cup, biceps tendon, and the undersurface of the rotator cuff. If a labral tear is found, this is repaired using small anchors that are inserted into drill holes made in the bone that have sutures attached to them. These sutures are then passed through the cartilage rim with specialized instruments and knots are tied, securing the labrum back to the bone. Healing of this cartilage to bone is slow and often takes four months or so to occur.

#### Rehabilitation:

After surgery, the arm and shoulder are kept in a sling for four weeks. Physical therapy is usually started three to four days after surgery and continues for about eight to twelve weeks. In some cases, however, physical therapy will be delayed for several weeks. After being discharged from therapy, home exercises are continued for two to three more months.

Return to light duty work, without much use of the arm or shoulder is allowed between seven to ten days. Heavy lifting, manual labor and return to sports is usually delayed about four months. Throwing sports like softball and volleyball are discouraged until six months after surgery.

#### Conclusion:

Labral tears are less common than other causes of shoulder pain, but do occur fairly often in active individuals. Diagnosis is often made by excluding other possibilities and thus may be delayed for several months. Treatment is quite successful, but almost always requires arthroscopic surgery.

Source: American Academy of Orthopaedic Surgeons, AAOS.org  
Modified by RP Murray, MD

