

Labrum Tear



The shoulder labrum is a rim of tough, resilient cartilage that deepens the shoulder socket and connects to important structures involved in shoulder and arm movement.

"The labrum can tear in the front, back, top, or in a combination of these locations."

The shoulder is the most mobile joint in the body. To achieve this, the labrum, a rim of rubbery fibrocartilage, surrounds the edge of the shoulder socket. The labrum deepens the otherwise quite flat socket by as much as 50%. This deep socket, combined with the strength of the rotator cuff muscles, is key in stabilizing the shoulder through a wide range of motion.

The labrum:

Attaches to the shoulder joint ligaments to provide a restraint against too much movement.

Enhances the shoulder socket's suction-like ability, as the rubbery and flexible edge helps hold the ball (humeral head) in the socket (glenoid fossa).

Creates a mechanical bumper to act as a shock absorber for a variety of movement-related forces.

Symptoms

The labrum can tear in the front (anterior), back (posterior), top (superior), or in a combination of these locations. A common type of labral tear that occurs at the top of the shoulder is called a SLAP tear.

Symptoms depend on the location and type of tear. Labral tears can have many non-specific symptoms:

- » Pain that is achy, felt deep within the socket, worse at night, and worse with overhead movement
- » Catching, locking, or grinding
- » Weakness
- » Reduced range of motion
- » Apprehension (fear that your shoulder will dislocate in certain positions) and feelings of instability

Causes

Labral tears have a variety of causes that fall into four categories:

- » Sports injury, often seen in overhead throwing athletes and collision sports
- » Repetitive use, commonly seen in athletes or occupations that require repetitive overhead actions
- » Degeneration, often related to age, arthritis, and wear and tear
- » Non-sports-related trauma, such as a shoulder dislocation during a motor vehicle accident

Diagnosis

The diagnosis of a labral tear begins with clarifying the injury or repetitive action, examining the shoulder, and reviewing x-rays to see if there are changes typical of specific labral injuries.

If a labral tear is suspected and prior treatment has not helped, or the shoulder symptoms will not allow a return to activities, the next level of evaluation is with an MRI.

In certain labral tears, such as anterior labral tears, bone injuries are common. Therefore a 3D CT scan may also be ordered to evaluate the bone injury and necessary treatment to resolve that injury.

Dr. Romeo may book a procedure called an arthroscopy, where a tiny camera and instruments are passed through keyhole cuts in the skin to directly see and treat injuries.

Types of labral tears

Anterior labral tear. When the shoulder dislocates toward the front (anterior), the labrum and capsule typically tear, and the edge of the upper arm bone (humerus) may be injured.

When this injury heals, the shoulder pain goes away, but patients often become apprehensive to put their arm above their head and rotate at the shoulder as if they were going to throw a ball. With this type of injury, patients are more likely to feel that their shoulder is loose or unstable rather than painful.

Posterior labral tear. Posterior tears from dislocations are rare. They occur when the shoulder dislocates to the back (posteriorly) and are commonly caused by seizures, electric shock, or trauma. Usually, after the initial injury heals, patients tend to report persistent pain rather than instability.

Posterior tears of the labrum related to sports are often related to subluxation of the humeral head but not a complete dislocation. They too are noted to primarily exhibit symptoms of pain rather than instability.

Superior labral tear. When tears occur in the top of the shoulder labrum, which is (known as a superior labral tear, or SLAP tear), pain and dysfunction of the shoulder persist, especially with overhead activities, while feelings of instability are much less common. The long head of the biceps tendon originates in the superior labrum, so SLAP injuries can feature pain traveling from inside the shoulder and down the front of the arm.

Nonsurgical treatment options

A labral tear seen on MRI does not require treatment unless it is causing discomfort or preventing you from doing necessary or desired activities. If the labrum is simply frayed at the edge—which is a normal part of aging—you may not have any symptoms of pain or instability.

Symptoms of a labral tear can resolve without surgery even in high-level athletes. An athlete who has a labral tear showing on MRI—but has no symptoms—does not require surgical treatment.

If a labral tear is causing pain or instability, it can be treated non-surgically with:



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- » Rest
- » Physical therapy
- » Over-the-counter medications

While many labral tears may initially respond to physical therapy, it is not unusual for people to become frustrated with the fact that the labral tear symptoms do not let them return to their pre-injury level of activity. Because of these limitations, athletes, workers, or those that enjoy recreational sports often decide to proceed with surgery to repair the torn labrum.

How surgery is performed

An arthroscopic labral repair is an outpatient surgery, which means you will get to go home the same day. During this surgery, a tiny camera and surgical instruments are inserted through small cuts in the skin around the shoulder joint. This allows the surgeon to examine the tear close up under magnification to determine the extent of the injury.

If the labrum is torn, it can be repaired using stitches (sutures) and anchors. The sutures tie the torn fibrocartilage of the labrum back together, while the anchors are embedded in the bone of the shoulder socket to hold the labrum in place. The number of anchors used depends on the size and area of the tear. If there is additional damaged tissue around the shoulder causing irritation, the surgeon can then smooth off the edges so it blends into the remainder of the repair.

Recovery time

After surgery, you will be sent home in a sling and pillow brace to keep your arm protected and supported. Dr. Romeo will give you specific instructions for post-op pain management. Many patients will be able to stop taking strong pain medications (narcotics) within a few days of the procedure.

You should allow four weeks for the labrum to become securely attached to the bone. But even at that point, it will not have its normal strength.

The first month of rehabilitation is focused on initiating movement of the shoulder while protecting the surgical repair. This includes simple movements of the shoulder, elbow, wrist, and hand.

The second month of healing is generally much easier, especially since the sling and pillow brace are no longer necessary. You'll start a supervised physical therapy program with the goal of achieving 80% or more of your normal motion while starting to strengthen the muscles around the shoulder with light resistance exercises. Typically, training the shoulder with weights begins around three months after an arthroscopic labral repair.

Results

Throughout the recovery process, you must gradually ease into physical activity. Despite the very strong sutures and anchors that are used to fix the labrum, the actual tissue of the labrum needs time to heal. Putting too much stress on the joint and

the repair site too early will result in damage to the repair, which can lead to a less desirable result with lingering limitations.

Following a gradual return to activity will give you the best chance to reclaim full use of your shoulder and even resume vigorous physical activity including collision sports, aggressive physical training programs, and physically demanding work responsibilities.

Dr. Romeo's goal for most patients who undergo labral tear surgery is to return to all activities without restrictions. Most patients, especially younger ones, will regain full range-of-motion and strength after labral tear surgery.

Want to learn more? Find relevant videos, animations, and research material related to this procedure at romeoorthopaedics.com. →



For more information about causes and treatment of shoulder labrum tears, please request an appointment with experienced Chicago orthopaedic surgeon Dr. Anthony Romeo.

Please visit our website to find out how to schedule your appointment.