

**DISEASES & CONDITIONS**

# SLAP Tears

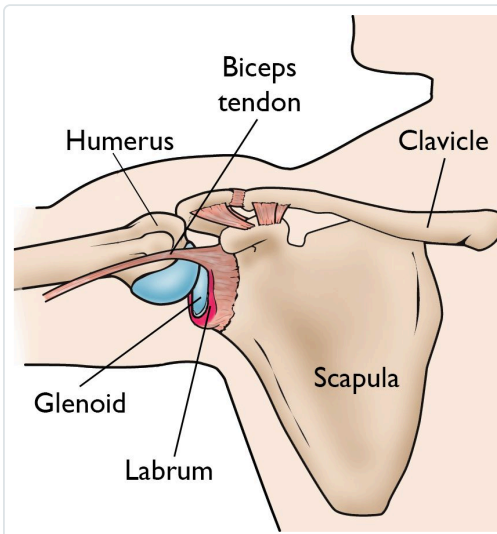
A SLAP tear is an injury to part of the labrum of the shoulder. The labrum is the ring of cartilage that surrounds the socket of the shoulder joint.

## Anatomy

The shoulder is a ball-and-socket joint made up of three bones:

- The humerus (upper arm bone)
- The scapula (shoulder blade)
- The clavicle (collarbone)

The head of the upper arm bone fits into a rounded socket in the shoulder blade. This socket is called the glenoid.



The labrum deepens the socket of the shoulder joint, making it a stronger fit for the head of the humerus.

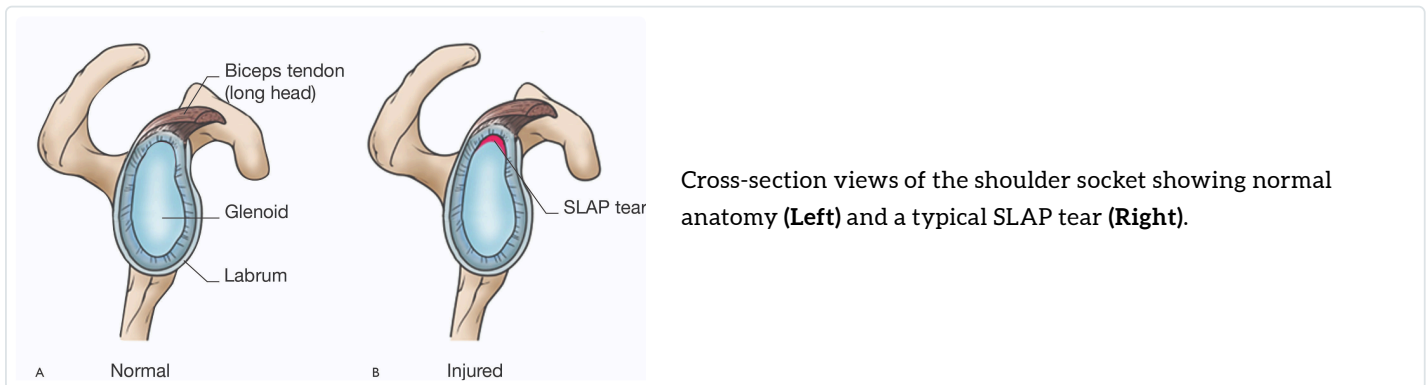
Surrounding the outside edge of the glenoid is a rim of strong, fibrous tissue called the labrum. The labrum:

- Helps to deepen the socket and stabilize the shoulder joint
- Serves as an attachment point for many of the ligaments of the shoulder, as well as one of the tendons from the biceps muscle in the arm

## Description

The term SLAP stands for superior labrum anterior and posterior.

In a SLAP injury, the top (superior) part of the labrum is injured. This top area is also where the biceps tendon attaches to the labrum. A SLAP tear extends from the front (anterior) to the back (posterior) of this attachment point. The biceps tendon can be involved in the injury, as well.



## Cause

Injuries to the superior labrum can be caused by acute trauma or by repetitive shoulder motion. An acute SLAP injury may result from:

- A motor vehicle collision
- A fall onto an outstretched arm
- Forceful pulling on the arm, such as when trying to catch a heavy object
- Rapid or forceful movement of the arm when it is above the level of the shoulder
- [Shoulder dislocation](#)

People who participate in repetitive overhead sports, such as [throwing athletes](#) or weightlifters, can experience labrum tears as a result of repeated shoulder motion.

Many SLAP tears, however, are the result of a wearing down of the labrum that occurs slowly over time. In patients over 30 to 40 years of age, tearing or fraying of the superior labrum can be seen as a normal process of aging. This differs from an acute injury in a younger person.

## Symptoms

The common symptoms of a SLAP tear are similar to many other shoulder problems. They include:

- A sensation of locking, popping, catching, or grinding
- Pain with movement of the shoulder or with holding the shoulder in specific positions
- Pain with lifting objects, especially overhead
- Decrease in shoulder strength
- A feeling that the shoulder is going to "pop out of joint"
- Decreased range of motion
- Pitchers may notice a decrease in their throw velocity, or the feeling of having a "dead arm" after pitching

# Doctor Examination

## Medical History

- Your doctor will talk to you about your symptoms and when they first began. If you can remember a specific injury or activity that caused your shoulder pain, it can help your doctor diagnose your shoulder problem – although many patients may not remember a specific event.
- It is also important to mention any work activities or sports that aggravate your shoulder, as well as the location of the pain, and what treatment, if any, you have had.

## Physical Examination

During the physical examination, your doctor will:

- Check the range of motion, strength, and stability of your shoulder
- Perform specific tests by placing your arm in different positions to reproduce your symptoms.
- Maybe examine your neck and head to make sure that your pain is not coming from a "pinched nerve"

The results of these physical tests will help your doctor decide if additional testing or imaging of your shoulder is necessary.

## Imaging Tests

**X-rays.** X-rays provide clear pictures of dense structures, like bone. The labrum of the shoulder is made of soft tissue so it will not show up on an X-ray. However, your doctor may order X-rays to make sure there are no other problems in your shoulder, such as [arthritis](#) or [fractures](#).

**Magnetic resonance imaging (MRI) scans.** An MRI scan can show soft tissues, like the labrum, better than an X-ray. Sometimes, a special type of MRI, called an MRI arthrogram, is needed to see the SLAP tear. This test is performed by injecting dye into your shoulder before the scan is taken.



**(Left)** An MR arthrogram image of a healthy shoulder. **(Right)** This MR arthrogram image shows a tear in the labrum (white dye shows a space between the triangular labrum and the glenoid bone).

# Treatment

## Nonsurgical Treatment

In most cases, the initial treatment for a SLAP injury is nonsurgical.

**[Nonsteroidal anti-inflammatory medication \(NSAIDs\)](#)**. Anti-inflammatory medications like ibuprofen and naproxen reduce pain and swelling.

**[Corticosteroid injections](#)** may also reduce inflammation and aid in diagnosis of SLAP tears if the source of pain is unclear.

**Physical therapy.** Specific exercises will restore movement and strengthen your shoulder.

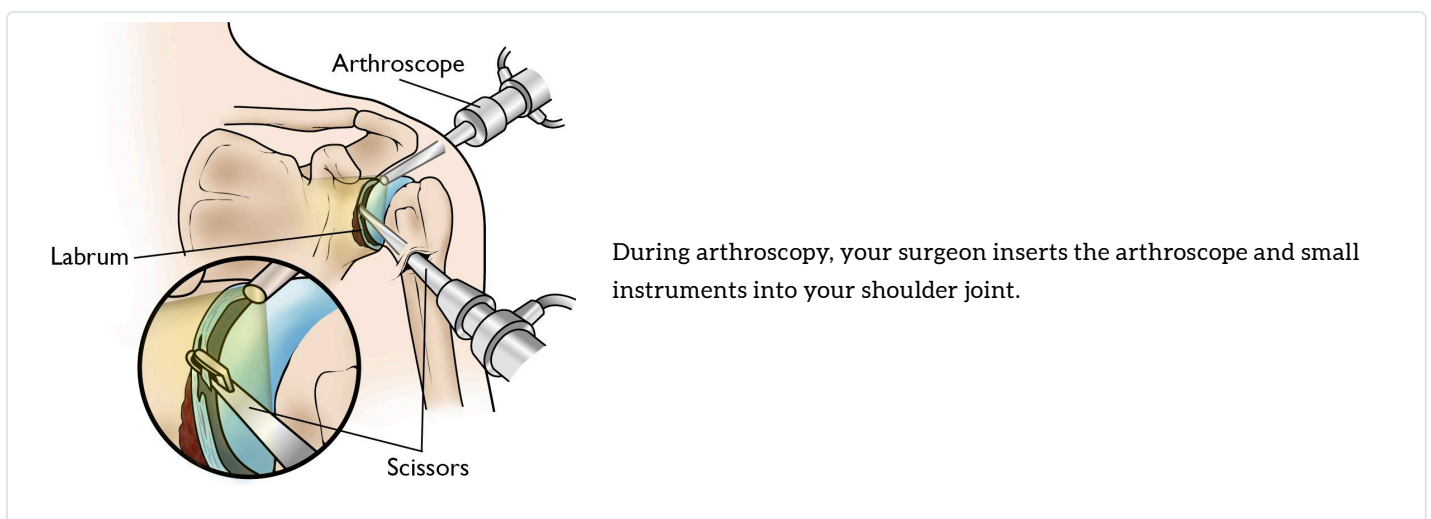
- Flexibility and range-of-motion exercises will include stretching the shoulder capsule, which is the strong connective tissue that surrounds the joint.
- Exercises to strengthen the muscles that support your shoulder can relieve pain and prevent further injury.

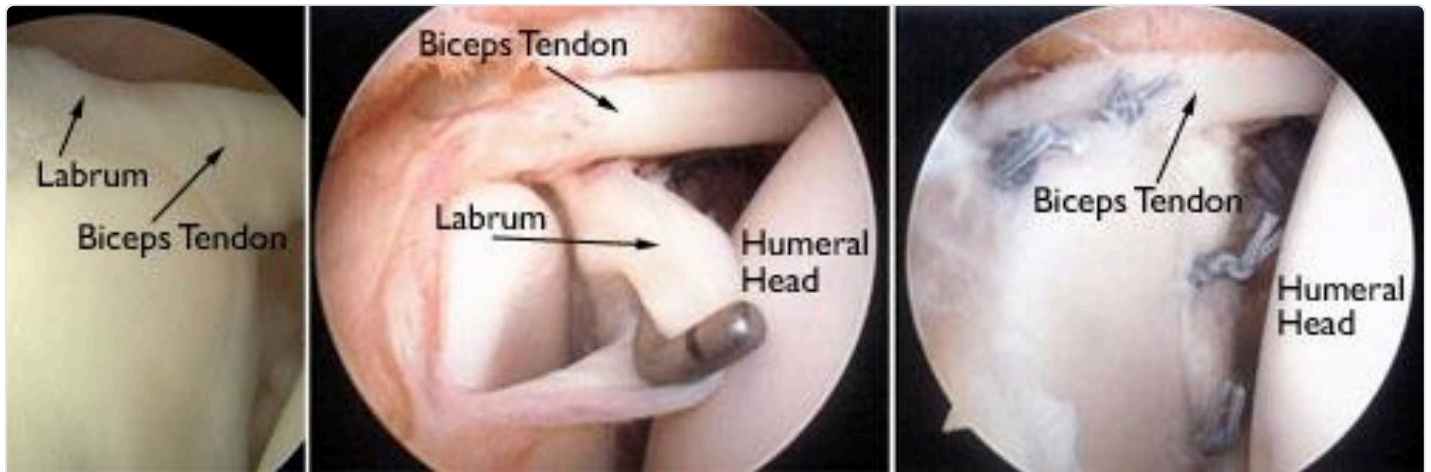
This exercise program can be continued anywhere from 3 to 6 months, and it usually involves working with a qualified physical therapist.

## ***Surgical Treatment***

Your doctor may recommend surgery if your pain does not improve with nonsurgical methods.

**Arthroscopy.** The surgical technique most commonly used for treating a SLAP injury is [arthroscopy](#). During arthroscopy, your surgeon inserts a small camera, called an arthroscope, into your shoulder joint. The camera displays pictures on a video monitor, and your surgeon uses these images to guide miniature surgical instruments.





**(Left)** An arthroscopic view of a healthy labrum. **(Center)** In this image, the surgeon uses a small instrument to evaluate a large SLAP tear. **(Right)** The labrum has been reattached with sutures.

Because the arthroscope and surgical instruments are thin, your surgeon can use very small incisions (cuts), rather than the larger incision needed for standard, open surgery.

**Treatment options.** There are several different types of SLAP tears. Your surgeon will determine how best to treat your SLAP injury once they see it fully during arthroscopic surgery.

- This may require simply removing the torn part of the labrum or reattaching the torn part using sutures.
- Some SLAP injuries do not require repair with sutures; instead, the biceps tendon attachment is released to relieve painful symptoms.

Your surgeon will decide the best treatment option based on the type of tear you have, as well as your age, activity level, and the presence of any other injuries identified during the surgery.

**Complications.** As with any surgery, however, there are some risks. These are usually minor and treatable. Potential problems with arthroscopy include:

- [Infection](#)
- Excessive bleeding
- [Blood clots](#)
- Shoulder stiffness
- Damage to blood vessels or nerves

Your surgeon will discuss the possible complications with you before your operation.

**Rehabilitation.** At first, your shoulder needs to be protected while the repaired structures heal. To keep your arm from moving, you will most likely use a sling for 2 to 6 weeks after surgery. How long you require a sling depends on the severity of your injury and the complexity of your surgery.

Once the initial pain and swelling has settled down, your doctor will start you on a physical therapy program that is tailored specifically to you, your injury, and your procedure.

- In general, a therapy program focuses first on flexibility. Gentle stretches will improve your range of motion and prevent stiffness in your shoulder.

- As healing progresses, your therapist will gradually add exercises to strengthen the shoulder muscles and the rotator cuff to your program. This typically occurs 6 to 10 weeks after surgery.

Your doctor will discuss with you when it is safe to return to sports activity. In general, throwing athletes can return to early interval throwing 3 to 4 months after surgery.

## Outcomes

The majority of patients report improved shoulder strength and less pain after surgery for a SLAP tear.

Complete recovery time is different for everyone and depends on your particular injury pattern, other health conditions, and individual activity goals.

In cases of complicated injuries and repairs, full recovery may take several months. Although it can be a slow process, following your surgeon's guidelines and rehabilitation plan is vital to a successful outcome.



Reviewed by members of

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