

# Latissimus Dorsi Tear



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The latissimus dorsi muscle is one of the strongest and largest muscles in the back, so it can cause a lot of pain when it's injured. Often referred to as the "lats," this muscle helps control the movement of the shoulder.

The latissimus dorsi stretches out like a fan from the mid-to-lower spine and connects to the upper arm bone. It is used when lifting the arm straight up in front (shoulder extension), bringing the arm alongside the body (adduction), and rotating the forearm toward the trunk (medial rotation). It is one of the main muscles involved in pull-ups, climbing, and wind and kite surfers.

Of note, when there is an injury to the latissimus dorsi, there is also often some involvement of the teres major muscle, since these two muscles work together.

## Symptoms

Latissimus dorsi injuries are uncommon (with the exception of baseball players). Patients often report feeling a pop or a sudden pain in the back of their armpit.

A baseball pitcher who injures their latissimus (or teres major) will feel the pain of injury after at the end of the pitching cycle, since the latissimus muscle decelerates the arm at the end of the throw.

## Causes

The latissimus dorsi muscle is used the most when performing exercises that involve pulling or throwing, so it can be injured while working out. Overuse, using poor technique, or not warming up before exercising can all contribute to latissimus dorsi injuries.

A latissimus dorsi tear is rare, but most commonly found in competitive athletes participating in activities such as water skiing, pitching in baseball, volleyball, gymnastics, rock climbing, or explosive weight training (e.g., cross-fit).

## Diagnosis

Latissimus dorsi tears can easily be confused with rotator cuff injuries, so it is important that they are thoroughly evaluated. A careful history and physical exam will help the doctor narrow down the cause of the pain, as well as learn what events led up to the injury. Afterward, x-rays can be used to rule out other issues. An MRI is the best test to show whether there is a latissimus dorsi injury, a teres major injury, or both, and to help guide treatment.

## Nonsurgical treatment options

In non-competitive athletes, surgery is usually not required. Treatment usually focuses on rest and physical therapy.

Your doctor may suggest:

- » Resting your back and shoulders and avoiding physical activities
- » Using ice or compression on the area
- » Elevating the area by placing pillows behind your upper back or shoulder or sitting upright
- » Anti-inflammatory medications for pain relief

For competitive athletes with a complete tear of the latissimus dorsi or teres major, surgical repair is likely to be the best choice for a successful return to sport.

## How surgery is performed

The latissimus dorsi repair is done by making a cut, or incision, in the back of the arm, near the armpit. The torn tendon is then located, and stitches called sutures are placed in the torn end. Those sutures are then used to pull the tendon back up to the arm bone to the place where the tendon detached from. Small metallic anchors, called buttons, are then used to affix the tendon to the bone.

## Recovery time

After surgery, patients will need to wear a shoulder immobilizer brace for six weeks. This time is crucial to allow the tendon to reattach to the bone. Elbow, wrist, and hand motions, however, can begin right after surgery.

Physical therapy begins two weeks following surgery with passive shoulder range-of-motion exercises.



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Passive range of motion means having another person (like a physiotherapist) move your injured arm so that you do not contract any muscles. Active range-of-motion exercises, or moving the injured arm on your own, begin six weeks after surgery.

## Results

Most patients are able to return to light recreational activities three to four months after surgery, with an anticipated return to sports six to eight months after surgery. High-level baseball players take up to one year to return to the same level of performance.

## FAQs

### Can latissimus dorsi pain and injuries be prevented?

Yes. You can prevent latissimus dorsi pain by:

- » Avoiding overuse
- » Maintaining proper form when exercising
- » Warming up before and cooling down after workouts

**Want to learn more?** Find relevant videos, animations, and research material related to this procedure at [romeoorthopaedics.com](http://romeoorthopaedics.com). →



*For more information about latissimus dorsi 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.**