



EmergeOrtho

# Guide to Shoulder Anatomy and Common Shoulder Injuries

The EmergeOrtho—Triangle Region Guide to Shoulder Anatomy,  
Common Shoulder Injuries, and More



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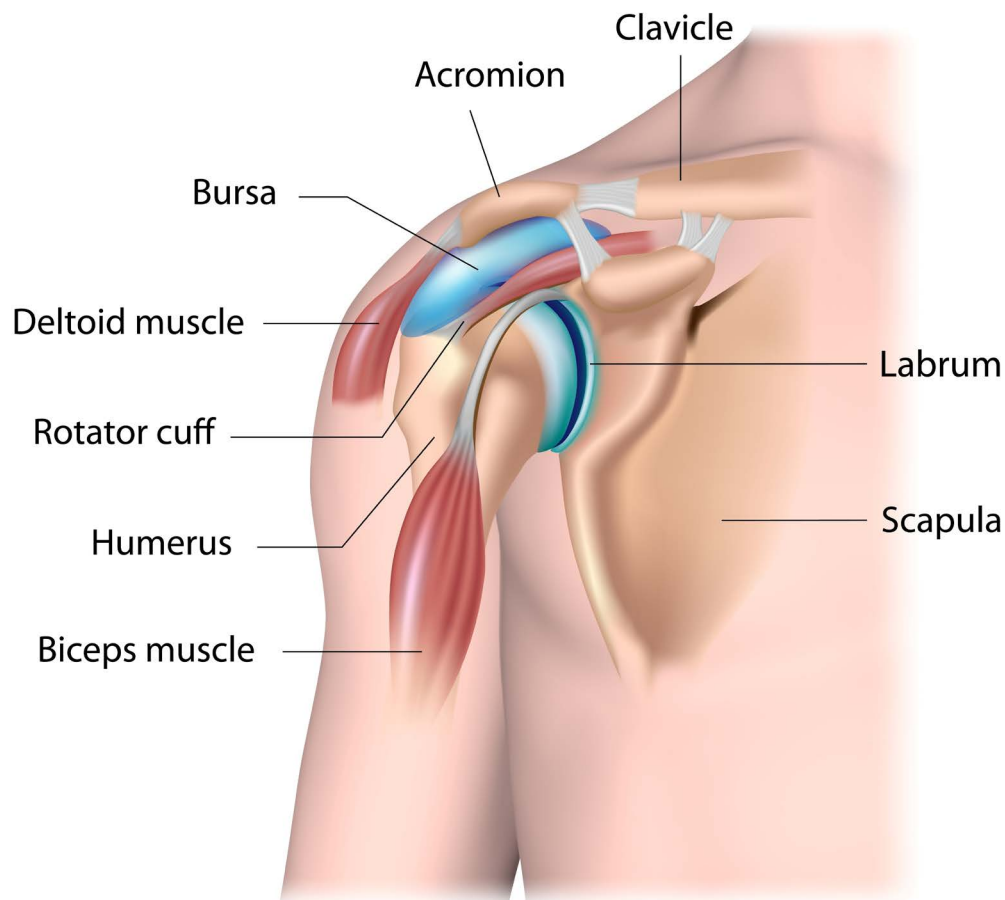
# Guide to Shoulder Anatomy and Common Shoulder Injuries

**In this Guide to Shoulder Anatomy and Common Shoulder Injuries, you will learn about:**

- *General shoulder anatomy*
- *Common orthopedic shoulder injuries, their symptoms, and how to treat them*
- *5 Shoulder injury prevention measures*
- *How the EmergeOrtho—Triangle Region experts can help you treat and prevent shoulder injuries*

The [shoulder](#) is one of the most commonly injured parts of the body. Shoulder injuries can cause severe pain that can interfere with your daily life. No one wants to miss out on work, enjoying time with their families, or doing their favorite hobbies. Finding out the most common shoulder injuries and how to treat those injuries will help get you back to the activities you love.

As you will learn below, many injuries can be treated with simple strategies such as rest and ice. However, depending on the type of injury and how severe it is, other treatment measures such as surgery may be advised. But even before your shoulder gets to the point of treatment or surgery, there are preventable measures that you can take to strengthen the muscles around the shoulders.



# Shoulder Anatomy

The shoulder is one of the most complex joints in the body, allowing for a huge range of motion to enable you to do day to day activities. Since everything you do with your hands relies on the support of the shoulder, a lot of stress is placed on the shoulder through work, sports, and even everyday activities. This is why shoulder injuries are common. Understanding basic shoulder anatomy will help you visualize the various potential damages and injuries that can occur in the shoulder joint.

## Shoulder Joint Anatomy

The shoulder joint is a ball-and-socket joint. The ball is at the end of the upper arm bone (humerus), which contacts the socket of the shoulder blade (scapula). The “cup” is made of a surface of bone and cartilage and is much smaller in size in relation to the ball, almost like a basketball sitting on a dinner plate.

The bony part of the cup is relatively shallow and flat and isn't very effective at keeping the ball centered by itself.

There is a ring of rubbery cartilage, similar to the cartilage in your ear or nose, that extends up and away from the bony part that deepens the cup and keeps the ball centered called the labrum.

Extra stability is provided by four muscles in the shoulder and the tendons that attach them to the bone - these make up the rotator cuff.

Besides the stability the rotator cuff helps provide, it also provides some of the power needed to lift and rotate the arm and keeps the ball centered in the cup. The shoulder joint's design allows for maximum mobility, but because of its complexity, injuries can frequently occur.

# Common Orthopedic Shoulder Injuries

Now that you understand shoulder anatomy better, you can better understand common orthopedic shoulder injuries. Below are the six types of common shoulder injuries:

- **Dislocation and Subluxation**

A dislocated shoulder occurs when the ball of the humerus pops out of the cup of the scapula. Since the shoulder is the body's most flexible joint, the shoulder has a greater likelihood of popping out than other joints. There are two types of instability:

1. A partial dislocation is where the humerus is partially out of the socket - this is called subluxation.
2. A complete dislocation is where the humerus is fully out of the socket.

A shoulder dislocation can come from many types of misfortunes such as a sports injury, fall, or an accident.

**Symptoms of a dislocated shoulder** include a visibly deformed or out-of-place shoulder, swelling or bruising, intense pain, inability to move the shoulder, numbness, weakness, or tingling. This is a medical emergency.

**Treatment for a dislocated shoulder** will include the humerus being reset in the socket at an orthopedic office, urgent care, or emergency room, followed by rest, ice, medication, physical therapy, and a sling to support the joint. Surgery is not that common after a single shoulder dislocation unless additional injuries like rotator cuff tears or fractures occur. For repeated dislocations, surgery is often recommended to prevent future dislocations.



“ Rotator cuff tears are one of the most common shoulder injuries and affect nearly 2 million Americans every year. ”

- **Rotator Cuff Tears**

They can creep up slowly over time due to gradual wear and tear, or come suddenly from a fall or other accident. There are two types of rotator cuff tears:

1. A Partial Rotator Cuff Tear happens when some of the fibers that make up the tendon tear but there are still fibers connecting the rotator cuff muscle to the bone of the humerus. In other words, there’s no “hole” through the tendon and the muscle stays attached to the bone by some of the tendons. If left untreated or aggravated, a partial tear can cause pain, limit the range of motion and may eventually get bigger and become a full-thickness tear.
2. A Full-Thickness Rotator Cuff Tear is when a shoulder tendon tears completely away from the bone. This usually causes significant pain, weakness, and limited function and motion. Delaying treatment of full-thickness tears can also make a surgical repair more difficult.

Rotator cuff tears can happen from natural degeneration (wear and tear) from aging or heavy overuse; a sudden, traumatic injury; falling on your shoulder; lifting something too heavy; a sports injury; or a forceful impact.

**Symptoms of a torn rotator cuff** vary depending on the type and severity of the injury but usually include pain from a sudden injury, arm weakness, cracking or popping with shoulder movement, pain when lifting, rotating, or resting the arm, or difficulty/inability to lift the arm.

**Treatment for a torn rotator cuff** will depend on the type of tear, the age of the patient, the patient’s level of function, and any associated medical conditions, and may result in surgery. Initially, most rotator cuff injuries are treated with rest, medications, physical therapy, or corticosteroid injections. If these treatments aren’t successful an ultrasound, MRI scan, or CT arthrogram is often ordered to check the status of the rotator cuff. With more severe injuries, an imaging study may be ordered immediately.

- **Shoulder Bursitis**

Bursae are sac-like structures that work to decrease friction between two surfaces, like hard bone and softer tissues. When there is too much friction or an injury occurs, the bursa can become irritated and inflamed, known as shoulder bursitis. There are three types of bursitis:

1. Chronic shoulder bursitis is the most common type of shoulder bursitis and develops over time. Most cases of chronic bursitis occur for no apparent reason other than gradual wear and tear.
2. Infection of the shoulder bursa is a more serious issue. Here, bacteria infects the bursa and can potentially spread throughout the body.
3. Traumatic shoulder bursitis (the least common) occurs from an injury and is most commonly seen in sports.

**Symptoms of shoulder bursitis** primarily consist of pain, especially with lifting the arm away from the body and when lying down to rest. The pain most commonly occurs in the outside part of the upper arm between the shoulder and the elbow. Symptoms from an infected bursa include tenderness, fever, fatigue, and feeling sick.

**Treatment for shoulder bursitis** includes activity modification, a sling, rest, ice, removing fluid with a syringe, corticosteroid injections, and anti-inflammatory medication. Surgery is rarely needed for shoulder bursitis.

- **Shoulder Impingement**

Shoulder impingement describes a mechanical “pinching” of the rotator cuff and bursa between the ball of the humerus and the bony roof above it (the acromion - see a diagram of the shoulder above). This can be caused by the shape of the acromion (which is different from person to person), weakness of the rotator cuff muscles or muscles around the shoulder blade, or overuse. Swimmers, volleyball and tennis players, and other overhead-throwing athletes are particularly susceptible to this type of overuse injury. Jobs that require a lot of lifting, particularly above the level of the shoulder, can also cause impingement.

**Symptoms of shoulder impingement** are similar to those of shoulder bursitis.

**Treatment for shoulder impingement** is activity modification, rest, medications, corticosteroid injections, occasionally slings, and physical therapy.



- **Shoulder Fractures**

A shoulder fracture is when one of the shoulder bones gets broken. The common fractures include the clavicle, proximal humerus (top of the upper arm bone), and scapula. These injuries can happen in traumatic instances such as a direct blow to the shoulder, a fall, an accident, or sports.

**Symptoms of shoulder fractures** include pain, swelling and bruising, inability to move the shoulder, a grinding sensation when the shoulder is moved, and visual deformity.

**Diagnosis of shoulder fractures** generally involves taking an X-ray.

**Treatment for a shoulder fracture** is icing, immobilization with a sling or wrap, oral pain medication, and physical therapy. While most shoulder fractures do not require surgery, in more severe situations surgery may be necessary.

- **Labrum Tear**

The labrum is the thick, rubbery cartilage attached to the socket described above. It deepens the socket and helps keep the “ball” in place. A labrum tear occurs when that cartilage gets torn from overuse from a repetitive/overuse motion or trauma to the shoulder. Three

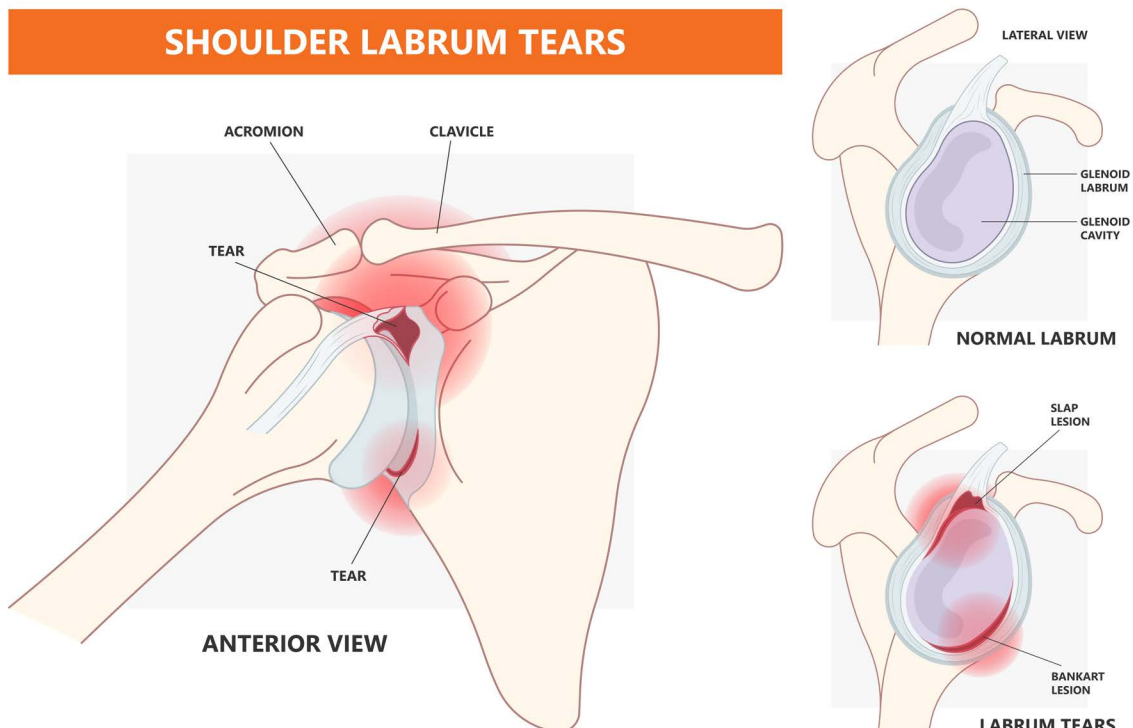
common types of labrum tears are:

1. **SLAP lesion** (Superior Labrum, Anterior to Posterior) happens at the top of the cup where the biceps tendon attaches to the labrum; as a result, both the top of the labrum and the biceps are detached from the cup.
2. **Bankart lesion**, happens from a dislocated shoulder when the labrum at the front, the bottom part of the cup tears away from the cup.
3. **Posterior labrum tear** occurs when the back of the labrum gets torn away from the cup.

**Symptoms of a labrum tear** include feelings of instability of the shoulder, shoulder dislocations, pain, a catching or locking feeling, decreased range of motion, and loss of strength. SLAP tears mostly cause these symptoms with overhead motions such as throwing.

**Treatment for a labrum tear** depends on the size of the tear and its location. Minor tears or fraying may need no treatment as there are little to no symptoms involved, but larger tears or SLAP tears may require surgery.

Regardless of the injury, listening to your physician will result in the best treatment plan and the quickest recovery possible. Failure to follow the instructions of your doctor may lead to other injuries, a prolonged recovery, or a potentially avoidable surgery.





# 5 Shoulder Injury Prevention Measures

“ About **18-26% of adults** will experience shoulder pain at some point in their lives, and not addressing the pain can lead to serious issues. ”

However, taking preventative measures can help strengthen your shoulder and reduce the chance of a minor or severe injury. Here are five preventative measures you can take to reduce shoulder injuries:

## 1. Be cautious at work

Your job can be demanding on your body. If you work manual labor, you constantly use your body for your job. If you work an office job, you may find yourself lifting heavy boxes or sitting for long periods of time. If you must lift heavy items, be sure to lift with the proper form by using your legs and refrain from placing heavy objects overhead. If possible, try lifting heavier objects with a partner.

## 2. Stay in shape

Staying physically fit will train your muscles to take on daily tasks. [Studies](#) indicate that those who do not stay fit have lower cardiorespiratory endurance or muscular endurance, making them more likely to get injured. Fit individuals can perform tasks at greater lengths because they are stronger and have more muscular endurance, which contributes to fewer injuries.

## 3. Exercise correctly

When working out, it is important to [warm up](#) and use proper techniques. Warming up loosens your muscles and improves blood flow to your joints. If you do not warm up, you go into your workout with “cold” muscles, meaning they are not ready to take on strenuous exercise.

When you do work out, maintaining proper form is essential to avoiding shoulder injuries. If certain exercises are performed incorrectly, you can put unnecessary stress on your joints.

After you finish exercising, be sure to cool down with [stretches](#). Stretching breaks up and releases lactic acid and more flexible muscles are less prone to injury.

## 4. Cross train

It is important to train your muscles and joints in several ways, especially if you are an athlete. Cross-training allows you to engage with different parts of your body. As an athlete, playing one sport focuses on only the parts of the body for that sport, which means other muscles and joints will not develop or strengthen. You can also risk overuse injuries.

## 5. Listen to your body

Your body will not lie to you. If you feel like your body is telling you to take a rest, listen. Bodies are not machines, and resting is a crucial aspect for not just preventing shoulder injuries but for life in general.

Though these measures may help to reduce the chance of a shoulder injury, they do not guarantee that you will not ever hurt your shoulder. Be sure to prioritize taking care of yourself, and if you feel like you are starting to get hurt, take a break and schedule an evaluation with your doctor.





## Emerge Stronger. Healthier. Better.

Battling shoulder injuries is not fun, and no one wants to deal with nagging pain. Our EmergeOrtho—Triangle Region [doctors](#) have the expertise, skills, and dedication to offer patient-centered care with the priority to get each patient to return to the activities they enjoy doing. Our doctors and therapists not only treat injuries, but they will design prevention strategies based on the individual patient.

To learn more about shoulder injuries or EmergeOrtho—Triangle Region orthopedic services and specialties, we encourage you to reach out any time by calling **(919) 220-5255**. Or, you can [request an appointment](#) with one of our experts now.



**Triangle Region**

**(800) 359-3053**

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