

## SHOULDER TENDINITIS

Shoulder tendinitis is a common overuse injury in sports (such as swimming, baseball and tennis) where the arm is used in an overhead motion. The pain – usually felt at the tip of the shoulder and referred or radiated down the arm – occurs when the arm is lifted overhead or twisted. In extreme cases, pain will be present all of the time and it may even wake you from a deep sleep.

The shoulder is a closely fitted joint. The humerus (upper arm bone), the tendons of the rotator cuff that connect to the muscles that lift the arm, and associated bursa (friction reducing membranes), move back and forth through a very tight archway of bone and ligament called the coracoacromial arch. When the arm is raised, the archway becomes smaller and compresses the tendons and bursa. Repetitive use of the arm makes the tendons and bursa prone to injury and inflammation.

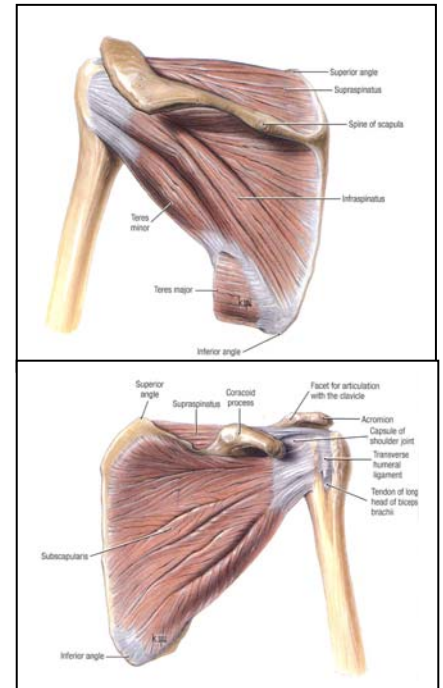
**Bursitis** occurs when the bursa becomes inflamed and painful due to compression inside of the coracoacromial arch.

**Tendinitis** occurs when a rotator cuff tendon becomes inflamed, swollen and tender.

Symptoms of tendinitis and bursitis usually last for only a few days, but may recur or become chronic.

### Stages of tendinitis

- **Overuse tendinitis.** Shoulder motions used during activities like golfing, throwing or overhead lifting may cause repetitive stress within the rotator cuff, leading to irritation, bruising or fraying of the tendon. This can cause shoulder pain and weakness in the joint.
- **Calcific tendinitis.** Inflammation over a long period of time can sometimes result in a build-up of calcium deposits within the rotator cuff tendons. This leads to pain and loss of shoulder strength and motion.
- **Impingement tendinitis.** When the space is narrowed between the rotator cuff and the coracoacromial arch, the humerus can “pinch” the rotator cuff tendon into the arch. This can happen when the cuff is weak, the bursa is swollen or if there is a bone spur present. Tendinitis caused by impingement can occur with repetitive shoulder activities, such as sports or jobs involving overhead reaching.
- **Rotator cuff tear.** Severe tendinitis from long term impingement, degeneration, or sudden injuries like falling can cause partial or complete tearing of the rotator cuff tendon(s). This can result in more severe shoulder pain, weakness and loss of normal movement and function.



## Contributing Factors

- **Overuse.** Repetitive overhead motions are the most common cause of the problem.
- **Weak muscles.** When the muscles are weak, more force is exerted on the tendons and bursa, causing inflammation and pain.
- **Improper/ inappropriate swimming or throwing techniques.**
- **Strenuous training.** One hard throw, weight lift or workout may start the problem.
- **Previous injuries to the shoulder.**
- **Loose shoulder joint**

## Treatment

- **Rest.** Avoid things that hurt or make the pain worse the next day. Avoid the activity that started the problem. Your doctor may recommend a sling to immobilize the shoulder.
- **Ice.** Apply an ice bag (over a towel) to your shoulder at least twice a day for 20 minutes. Also apply ice after any activity that aggravates your shoulder pain.
- **Medication.** Your doctor may prescribe anti-inflammatory/analgesic medication (in tablet form) to relieve pain and inflammation while your body's natural healing process goes on. An injection of cortisone with novocaine into the shoulder may be recommended. After receiving an injection, do not attempt any vigorous activities with your arm for at least two weeks.
- **Physical therapy.** Your doctor may send you to a physical therapist for exercises or other therapy. Exercises to strengthen the shoulder may help to prevent a recurrence.
- **Surgery.** Surgery may be required to treat shoulder tendinitis and bursitis if it becomes chronic or if there is a tear of the rotator cuff.

## Returning to sports

**General Principals.** In severe cases, all sports using the arm should be avoided. When you go back to your sport, *go back slowly*. Warm up well and do flexibility exercises before starting. Avoid the overhead position and do not play for a long time. Gradually increase the intensity of your activity.

**Throwing sports.** Warm-up well. Throw easily and gradually increase to harder throwing. Try to maintain a smooth throwing motion that will make use of the overall strength of your body. You can use the 'Interval Throwing Program Phase One- Long Toss' which can be found online at: [http://www2.massgeneral.org/sports/protocols\\_therapy\\_sportsconditioning.html](http://www2.massgeneral.org/sports/protocols_therapy_sportsconditioning.html)

**Swimming.** Breast stroke or side stroke will be easier than crawl or butterfly strokes. Sometimes the back-stroke is all right. Be sure that your swimming mechanics and style are correct. You can use the 'Interval Swimming Program' which can be found online at: [http://www2.massgeneral.org/sports/protocols\\_therapy\\_sportsconditioning.html](http://www2.massgeneral.org/sports/protocols_therapy_sportsconditioning.html)

## **Exercises and rehabilitation**

Your doctor or physical therapist will instruct the appropriate stretching and strengthening exercises. It is recommended that you do not begin shoulder exercises without proper instruction and exercise selection based upon your particular set of shoulder circumstances.

### **Stretching Exercises**

Stretching exercises can be done to help restore shoulder range of motion. Each stretch can be done to the point of a comfortable feeling of stretch and should be done slowly to allow the muscles and soft tissues time to lengthen. Hold each stretch for 15 to 20 seconds. When stretching, your goal is to reach the maximum range of motion for you. It is recommended that you warm-up well before stretching. Generally, you should do some walking, cycling or jogging so that you break a sweat before you start stretching.

Allow the first one or two repetitions to be warm-up reps, with little or no pain. Gradually work into more and more range of motion as you begin to feel more flexible. Mild pain while stretching sometimes occurs, however it is not recommended that you “push through the pain”. If you are patient, the arm will become looser as it warms-up. Do 5 to 10 repetitions, 2 or 3 times a day.

Shoulder stretching exercises can be found online on the MGH Sports Medicine website:

[http://www2.massgeneral.org/sports/protocols\\_therapy\\_sportsconditioning.html](http://www2.massgeneral.org/sports/protocols_therapy_sportsconditioning.html)

### **Strengthening exercises**

#### **Theraband Strengthening for the shoulder**

These resistance exercises should be done very slowly in both directions. The goal is to achieve a maximum amount of strengthening while listening to your end-point of pain. Work within a pain free range of motion at all times and do the exercises very slowly. The slower the motion, the better the muscle contraction is throughout the range of movement.

Shoulder theraband exercises can be found online on the MGH Sports Medicine website:

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#### **Rotator Cuff and Scapular Strengthening Program**

The rotator cuff and scapular exercises are intended to isolate the essential muscles of the shoulder that provide strength to the rotator cuff and control the scapula (shoulder blade). Each exercise should be done for one set of 15 repetitions prior to a weight training workout or 2-3 times a week for good shoulder strength and muscle balance. Weights used with these exercises can be built up gradually in increments of no more than 1 pound per week, with a safe limit of 5 lb.

Rotator cuff and scapular exercises (Shoulder 12 Strengthening Program) can be found online on the MGH Sports Medicine website:

[http://www2.massgeneral.org/sports/protocols\\_therapy\\_sportsconditioning.html](http://www2.massgeneral.org/sports/protocols_therapy_sportsconditioning.html)

### **Contacts:**

**MGH Sports Medicine Main Telephone Number: 617-726-7500**

**MGH Sports Physical Therapy: 617-643-9999**

Website: <http://www.mghsportsmedicine.org/>