

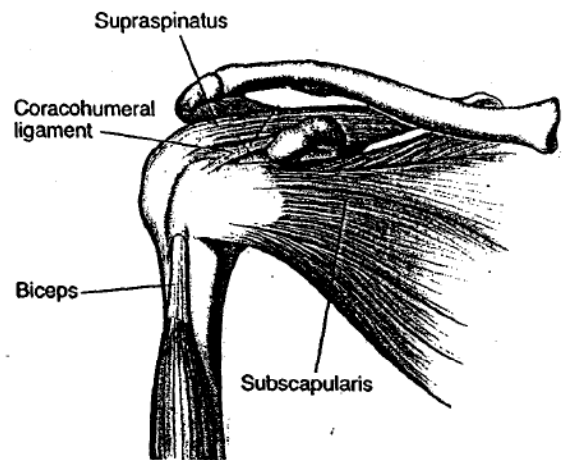
Shoulder Tendinitis

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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. Initially, an underhand or side arm throw will be easier than an overhand throw. 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.

Swimming. Breast stroke or side stroke will be easier than crawl or butterfly strokes. Sometimes the back-stroke is alright. Be sure that your swimming mechanics and style are correct.

Exercises and Rehabilitation

Your doctor or physical therapist will instruct the appropriate stretching and strengthening exercises. These exercises are illustrated on the following pages.

Stretching Exercises

The following 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 very little 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

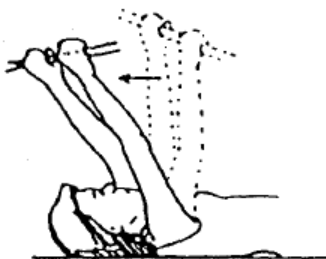
Pendulum exercise

Bend over at the waist and let the arm hang down passively. Using your body to initiate movement, swing the arm gently forward and backward and in a circular motion. Do this pendulum exercise for several minutes, 3 to 5 times per day. Use this exercise as a warm-up activity before stretching.



Supine passive arm elevation

Lie on your back. Hold a cane or stick in both hands, gripping the stick with the hands about 18 inches apart. With the elbows straight and assisting with the opposite arm, lift the cane upward, with the injured arm holding on, as if to bring the hands overhead. Slowly lower the arm back to the bed. The good arm should do as much of the lifting and lowering in this exercise as needed to avoid pain.



Hands Behind the Head Stretch

Lie on your back. Place your hands behind your head as shown in the top picture. Slowly lower the elbows to stretch the shoulder toward the position shown in the bottom picture of figure one. Hold this position for ten seconds, then return to the starting position. Do ten repetitions, two times a day.



Supine cross-chest stretch

Lying on your back, hold the elbow of the injured arm with your opposite hand. Gently stretch the elbow toward the opposite shoulder.

Standing external rotation

Stand with the injured shoulder toward a door as illustrated. While keeping the operated arm firmly against your side and the elbow at a right (90 degree) angle, rotate your body away from the door to produce outward rotation at the shoulder. Hold ten seconds. Do ten repetitions, two times a day.



Behind-the-back internal rotation

Sitting in a chair or standing, place the hand of the injured arm behind your back at the waistline. Use your opposite hand to pull on a towel, as illustrated, to help the other hand higher toward the shoulder blade.

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. Do all exercises 15 to 20 times each, one to two times a day.

Theraband strengthening exercises are illustrated on a separate page.

Theraband exercises

Resistance varies with colors:

- **Yellow** – light resistance
- **Red** – medium resistance
- **Blue** – Heavy resistance
- Ask the doctor or physical therapist which resistance you should use

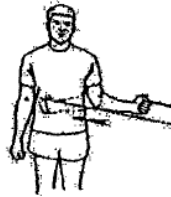
Theraband External Rotation

- Using Theraband, keep the elbow against your side and the forearm at a right angle to the body.
- Starting with the forearm against your abdomen, rotate the arm outward.
- Slowly return to the starting position.
- Do 20 repetitions one to two times a day



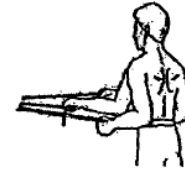
Theraband Internal Rotation

- Using Theraband, keep the elbow at your side and the forearm at a right angle to the elbow.
- Rotate the arm inward across the body.
- Slowly return to the starting position.
- Do 20 repetitions, one to two times a day.



Theraband Rowing

- Attach the Theraband securely to a door knob or object at similar height
- Starting with the arm held straight in front of your chest, pull the Theraband all the way toward the chest.
- Pull the cord, so that your elbows are drawn along the side of the body until the hands touch your side.
- Return slowly to the start position.
- Do 20 repetitions, 1 to 2 times a day.



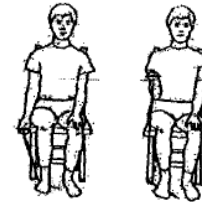
Theraband Shoulder Shrug

- Stand on the Theraband with your feet at shoulder width apart and look straight ahead.
- With the knees slightly flexed and your arms straight down at the sides (palms in), slowly raise the shoulders in a shrug (toward the ears) and then down to the original position.
- This movement is completed while keeping constant tension on the cord.
- Do 20 repetitions, 1 to 2 times a day.



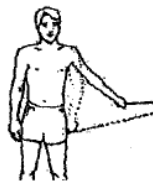
Theraband Biceps Curl

- Standing or sitting, place your feet on the cord, shoulder width apart, knees slightly bent.
- Keeping your elbows close to the sides of your body, slowly bend the arm at the elbow and curl towards the shoulder.
- Alternate arms while performing this exercise.
- Do 20 repetitions one to two times a day



Theraband ADDuction

- Using Theraband, starting with the elbow straight and the arm 45 degrees away from the body at the side,
- pull the arm inward toward the front of your thigh.
- Slowly return to the starting position.
- Do 20 repetitions, one to two times a day.



Theraband Punch

- Facing away from the door, stand in a boxing position with one leg ahead of the other
- Do not bend at the waist and remain in an upright position.
- If the right shoulder is the injured extremity, you will want to grasp the handle in the right hand and step out until the cord is taut. If you use the right hand, the left foot should be forward in the stride position.
- Slowly punch forward while slightly raising the right arm in a forward, upward punching motion.
- The hand should reach approximately neck level with the right arm almost straight.
- Do 20 repetitions, one to two times a day.

