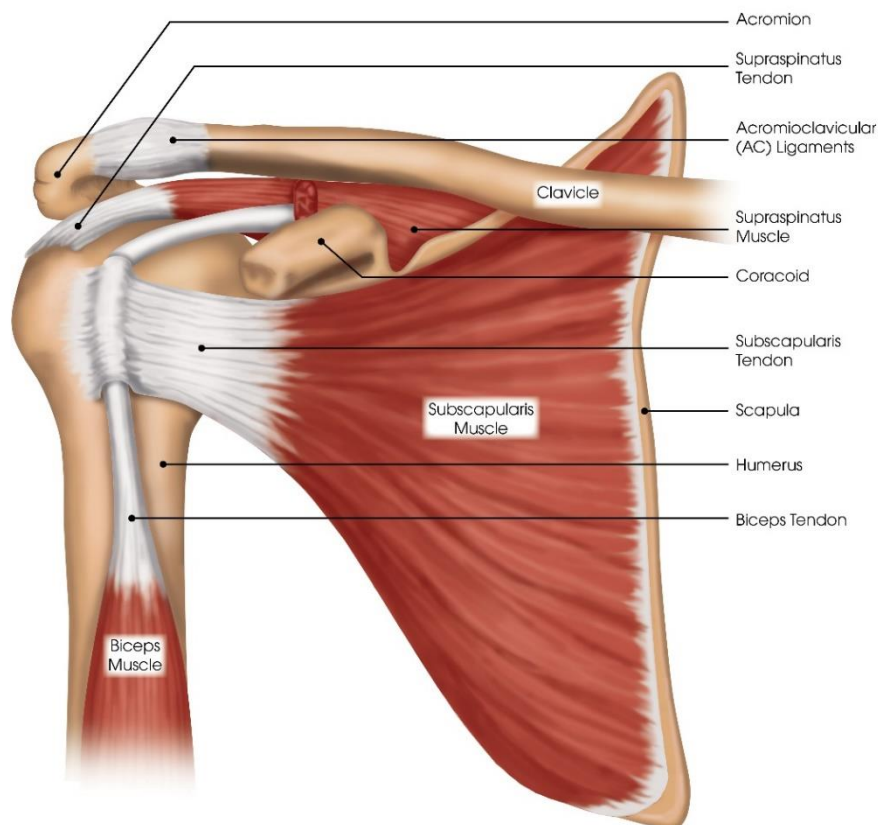


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Rotator Cuff Tear

The rotator cuff is a series of four muscles that run from the shoulder blade (scapula) around the shoulder socket (glenoid) and attach to the ball of the shoulder (humeral head) by their tendons. The muscles of the rotator cuff work to keep the humeral head centered in the socket as the arm moves. Injury or degeneration (wear and tear) can result in a tear of the rotator cuff tendon. Rotator cuff tears affect the ability to keep the humeral head centered on the socket, subsequently causing weakness and pain. Therefore, as the arm elevates, the rotator cuff tendons and subacromial bursa (which sits on top of the rotator cuff) come into contact with the coracoacromial arch that serves as the bony roof of the shoulder joint. This contact can cause pain and inflammation, resulting in further rotator cuff weakness and creating a cycle of pain with repeated use of the shoulder.

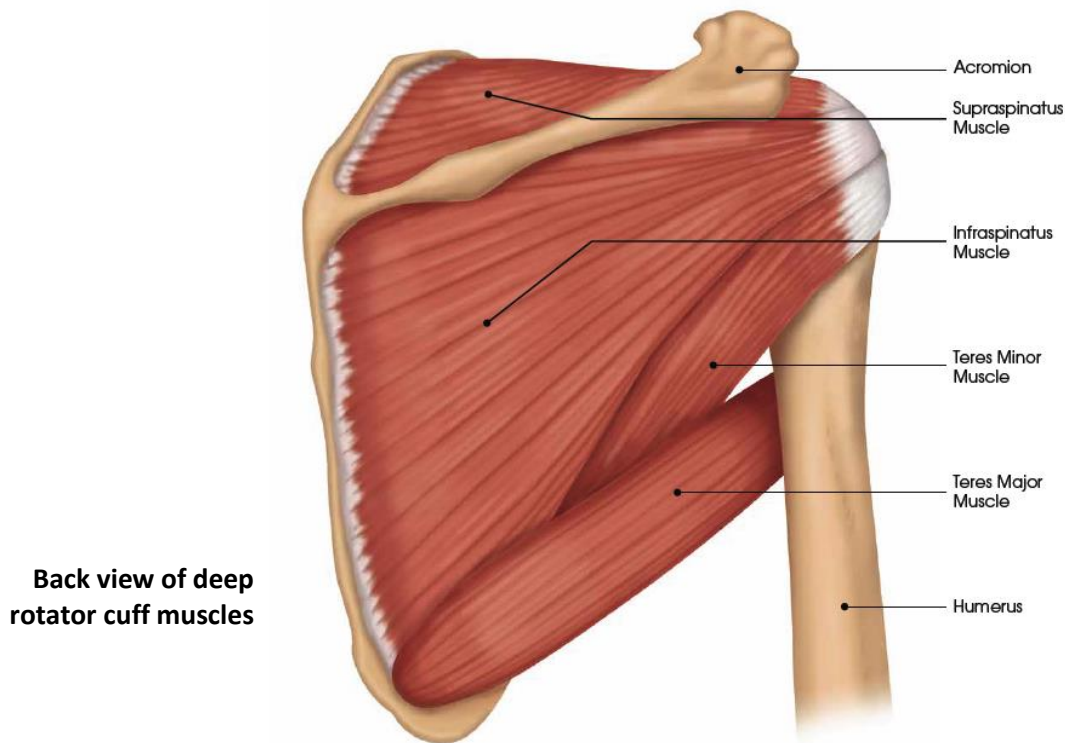


Front view of deep rotator cuff muscles



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Frequent Signs and Symptoms

- Pain along the upper arm between the shoulder and elbow
- Pain that is increased when reaching out and overhead or when lifting objects
- Aching pain at rest or at night while trying to sleep
- Loss of strength
- Limited motion of the shoulder, especially reaching behind for a back pocket or bra clasp
- Crepitation (a crackling sound) when moving the shoulder

Etiology (Causes)

- Direct injury to the shoulder such as falling on an outstretched arm
- Aging or degeneration (wear and tear) of the tendon with use
- Shoulder dislocation (typically in patients over age 40)
- Impingement (subacromial) of the rotator cuff on coracoacromial arch (bony-ligamentous roof of the shoulder) causing fraying and wear of the tendon
- Impingement (Internal) of the rotator cuff on the posterosuperior glenoid (socket)



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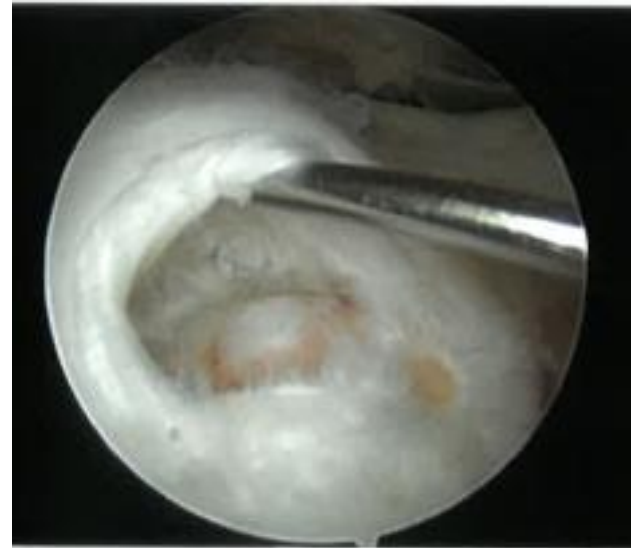
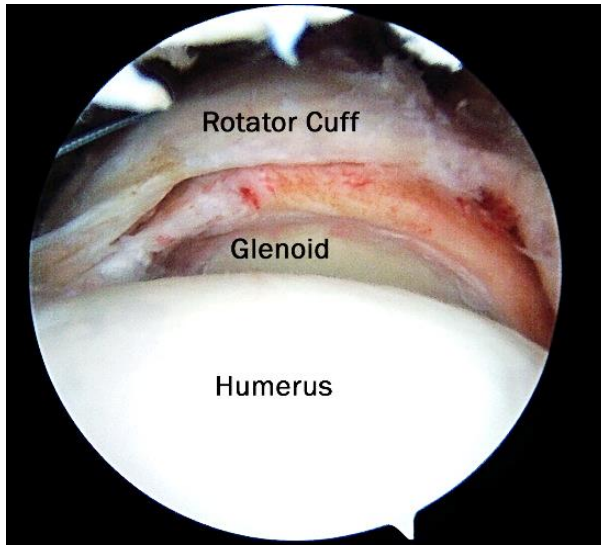
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Arthroscopic view of rotator cuff tear(s)

Risk Factors

- Contact sports or throwing sports
- Weightlifting and bodybuilding
- Heavy or repetitive overhead labor
- Previous injury to rotator cuff including impingement
- Poor physical conditioning (strength and flexibility)
- Inadequate warm-up before activities
- Inadequate protective equipment
- Increasing age
- Spurring of the acromion (bony roof of the shoulder) on Os Acromiale
- Repeated corticosteroid injections

Prevention

- Appropriately warm up and stretch before practice or competition
- Allow time for adequate rest and recovery between practices and competition
- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Shoulder flexibility
 - Strength and endurance of the rotator cuff muscles and muscles of the scapula (shoulder blade)
- Use proper technique when lifting and working overhead



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Outcomes

Symptoms may resolve by avoiding/limiting aggravating activities and performing physical therapy exercises to strengthen the remaining intact rotator cuff muscles to compensate for the tear. However, rotator cuff tears do not heal with conservative treatment and will get larger with time. Eventually, an untreated rotator cuff tear may become nonfunctional and irreparable. Surgery is often needed to repair the rotator cuff tear and alleviate pain and restore function. Dr. Chudik can perform arthroscopic surgery to re-attach the torn muscles to the bone.

Potential Complications

- Persistent pain that may progress to constant pain as the tear progresses
- Shoulder stiffness, frozen shoulder, or loss of motion
- Persistent weakness
- Recurrence of symptoms, especially if treated without surgery
- Inability to return to same level of function even if the tendon is repaired
- Arthritis/rotator cuff arthropathy
- Risks of surgery, including infection, bleeding, injury to nerves, shoulder stiffness, weakness, re-tearing of the rotator cuff tendon, and persistent pain.

Treatment Considerations

Treatment depends on the patient's medical health and demands (activity level), the presence of arthritis and the reparability of the tear. For large possibly irreparable tears, elderly patients with low demands, or poor surgical candidates because of other health conditions, restricting activity to prevent symptoms combined with physical therapy to optimize the function of the remaining intact (not torn) rotator cuff muscles is the most appropriate initial treatment. For irreparable tears with shoulder arthritis (rotator cuff arthropathy), initial treatment is the same except in rare cases when a reverse shoulder replacement may be warranted. For irreparable tears that have failed the initial activity restriction and therapy, arthroscopic surgery to debride (clean-up) the rotator cuff and shoulder joint, release or use the damaged biceps tendon to partially repair the rotator cuff, remove the inflamed bursa or decompress the bony space between the humeral head (ball of the shoulder) and the acromion (bony roof of the shoulder) may be helpful to relieve symptoms.

For all other symptomatic rotator cuff tears, surgery is usually recommended to repair the rotator cuff tendon back to the arm bone. Surgery may be performed arthroscopically or with an open incision. Return to full activity usually requires six to eight weeks in a sling followed by four to six months of physical therapy.



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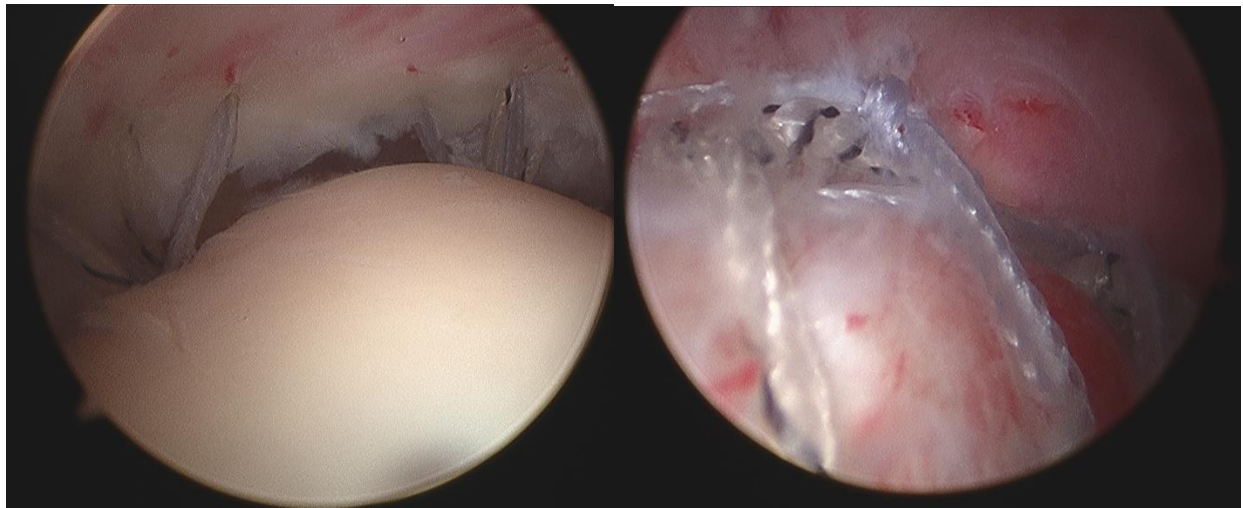
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Arthroscopic view of rotator cuff repair. On the left, an intra-articular view of repair in progress, showing the sutures grasping the torn tendon edge before tying. At right, a view from above the rotator cuff tendon in the subacromial space after the sutures are tied.

Possible Medications

- Nonsteroidal, anti-inflammatory medications, such as aspirin, ibuprofen, Advil®, Motrin®, or Naprosyn®, Aleve®, or other minor over-the-counter pain relievers, such as acetaminophen, or Tylenol®, may be helpful. Do not take nonsteroidal anti-inflammatory medications within 10 -14 days of surgery or following surgery. Stop these medications if they cause any bleeding or upset stomach.
- Pain relievers are not prescribed after this type of injury but may be prescribed after surgery as necessary. Use only as directed.
- Steroid injections reduce inflammation and can be helpful in certain cases but should be used with proper discretion. They can negatively affect the biomechanical properties of the tendon and should not be used when surgery is planned.

Modalities (Heat and Cold)

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

Notify My Office if Symptoms Worsen



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