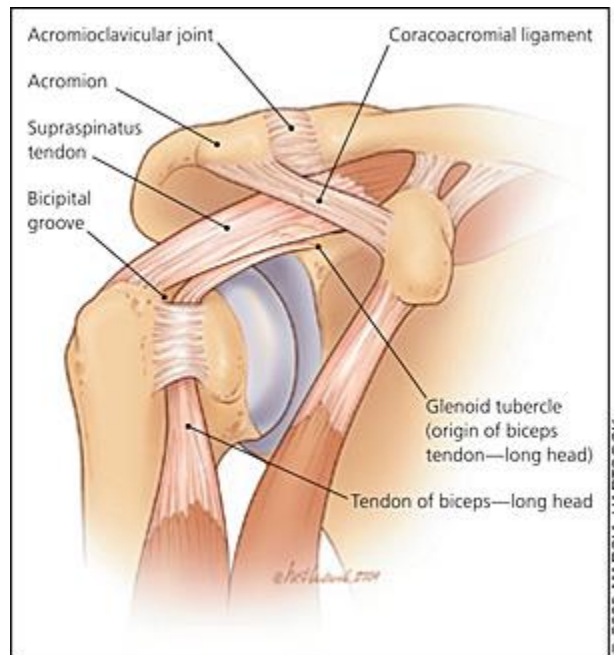


BICEPS TENDINITIS

Bicipital tendinitis, or biceps tendinitis, is an inflammatory process of the long head of the biceps tendon and is a common cause of shoulder pain due to its position and function.

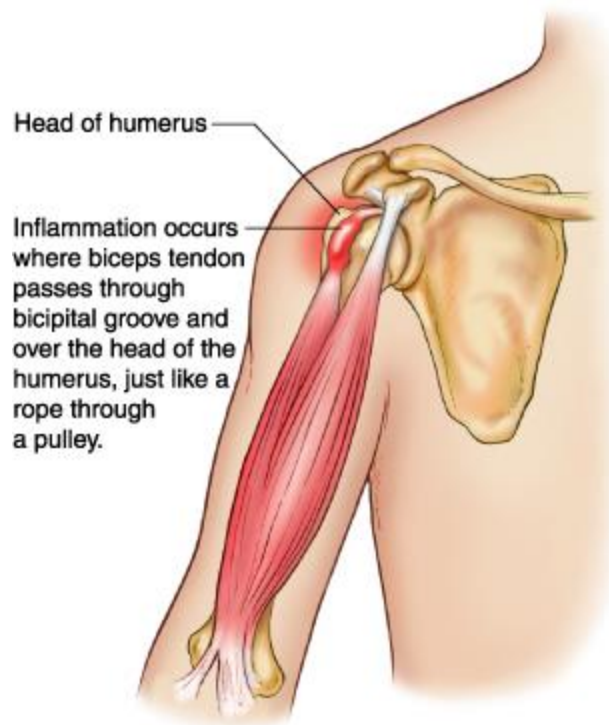
Biceps tendinopathy is the umbrella term for biceps injuries that include:

- Biceps tendonitis/tendinitis (inflamed tendon).
- biceps tendinosis (non-inflamed degenerative tendon).
- Biceps tenosynovitis (inflamed tendon sheath).
- Ruptured biceps tendon (secondary to degeneration or tear).



ANATOMY:

The biceps brachii has two heads: short and long heads. It is the long-head of biceps that becomes symptomatic. The biceps long head passes over the head of the humerus and attaches to the top of the shoulder socket. The long head of the biceps acts as a shoulder joint stabiliser through depression of the humeral head. The biceps tendon travels through the bicipital groove on the front of the shoulder ball, which is where most inflammation - usually friction related - occurs. If inflammation is the cause it will be diagnosed as either a biceps tendonitis or tenosynovitis.



TYPES:

The type of bicep tendonitis a person has depends on which tendon has become affected:

- **Distal bicep tendonitis:** This is when inflammation occurs at the end of the tendon connecting the biceps muscle to the elbow.
- **Proximal bicep tendonitis:** This is when there is inflammation at the end of the tendon connecting the biceps muscle to the shoulder.

CAUSES:

Causes of bicep tendonitis can include:

- General wear and tear
- Overuse of a tendon in a repetitive motion
- Poor posture
- Lifting something heavy
- Poor technique while playing sports
- Injury
- Shoulder impingement

RISK FACTORS:

People may develop bicep tendonitis as a form of repetitive strain injury. If they have poor technique while playing a sport or if they have poor posture while working, they may tear the tendons in their biceps.

Other risk factors include:

- **Age:** Older adults have more wear and tear on their tendons as they have more years of use.
- **Activities requiring overhead heavy lifting:** Whether it is as part of work, sports, or exercise, people who lift heavy things over their heads such as weightlifters or those with jobs requiring heavy labor can cause extra wear and tear on their tendons.
- **Repetitive shoulder use:** Sports that require repetitive overhead movements such as swimming or tennis can cause a tendon to wear more.
- **Smoking:** According to the American Academy of Orthopaedic Surgeons (AAOS), there is a link between the use of nicotine and poor tendon quality and strength.

SYMPTOMS:

Symptoms of bicep tendonitis may include:

- Pain that worsens with movement
- Difficulty moving the joint which may lead to restricted mobility
- Muscle weakness
- Pain that worsens with overhead movement in particular
- A clicking, grating, or snapping sensation with movement of the shoulder
- Swelling in the area often co-occurring with heat or change in skin colour
- Difficulty rotating the arm

DIAGNOSIS:

Palpation: Pain with palpation over the bicipital groove (which is most felt in 10° of internal rotation) is a common physical finding for patients with biceps tendinopathy.

Range of Movement (ROM): Testing of cervical, shoulder and elbow AROM should all be completed as well as PROM of shoulder and elbow.

Strength Testing: Strength testing of shoulder, elbow and wrist should all be done to ensure no significant weakness of other structures.

Provocative tests (special test): These tests should be used to help guide the diagnosis:

- **Yergason's test:** Yergason's test requires the patient to place the arm at his or her side with the elbow flexed at 90 degrees, and supinate against resistance. The test is considered positive if pain is referred to the bicipital groove.
- **Neers test:** involves internal rotation of the arm while in the forward flexed position. If the patient experiences pain, it is a positive sign of shoulder impingement syndrome or sub acromial pain syndrome.

IMAGING TEST:

MRI scans: This scan type can show any tears of the tendon and enable doctors to clearly assess the injury.

X-rays: These cannot show soft tissues, such as tendons, but they can help rule out other causes of the symptoms a person is experiencing.

TREATMENT:

Conservative treatment:

- **Rest:** The first step toward recovery is to avoid activities that cause pain.
- **Ice:** Apply cold packs for 20 minutes at a time several times a day to keep swelling down. Do not apply ice directly to the skin.
- **Nonsteroidal anti-inflammatory drugs (NSAIDs):** Anti-inflammatory drugs like ibuprofen, aspirin, and naproxen can reduce pain and swelling.
- **Steroid injections:** Steroids such as cortisone are very effective anti-inflammatory medicines. Injecting steroids into the tendon can relieve pain.

Surgical treatment:

Repair: Rarely the biceps tendon can be repaired where it attaches to the shoulder socket.

Biceps tenodesis: In some cases the damaged section of the biceps is removed, and the surgeon reattaches the remaining tendon to the humerus. This procedure is called a biceps tenodesis.

Tenotomy: In some cases the long head of the biceps tendon may be so damaged that it is not possible to repair or tenodesis it. The surgeon may simply elect to release the damaged biceps tendon from its attachment. This is called a biceps tenotomy.

PHYSICAL THERAPY:

Exercise therapy should include:

- Restoring a pain free range of motion - Pain free range can be achieved with such activities as PROM, Active-Assisted Range of Motion (AAROM), and mobilization,
- Proper scapulothoracic rhythm.
- Painful activities such as abduction and overhead activities should be avoided in the early stages of recovery as it can exacerbate symptoms.
- Strengthening program consisting of heavy slow loading should begin with emphasis on the scapular stabilizers, rotator cuff and biceps tendon.

Modalities: Therapists also use modalities including ultrasound, iontophoresis & low-level laser therapy.

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