The Orthopaedic Group

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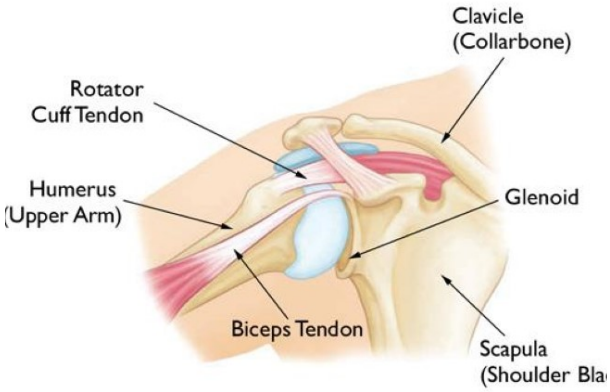
Biceps Tendinitis

What is it?

Biceps tendonitis is an inflammation or irritation of the upper biceps tendon, being a common cause of shoulder pain. The biceps is located in the front of the upper arm (humerus), and is used when lifting, bending and rotating the elbow, and reaching up over the head. Lifting, pulling, reaching, or throwing repeatedly can lead to biceps tendinopathy or even tears of the upper biceps tendon.



Biceps tendinitis usually occurs along with other shoulder problems. In most cases, there is also damage to the rotator cuff tendon. Other problems that often accompany biceps tendinitis include:

- Arthritis of the shoulder joint
- Tears in the glenoid labrum, particularly a SLAP tear
- Chronic shoulder instability (dislocation)
- Shoulder impingement
- Other diseases that cause inflammation of the shoulder joint lining

What Causes It?

In most cases, damage to the biceps tendon is due to a lifetime of normal activities. As we age, our tendons slowly weaken with everyday wear and tear. This degeneration can be worsened by overuse — repeating the same shoulder motions again and again.

Many jobs and routine chores can cause overuse damage. Sports activities, particularly those that require repetitive overhead motion, can also put people at risk for biceps tendinitis.

Biceps tendonitis can happen from a direct injury. A tear to the ligament that supports the biceps can also lead to biceps tendonitis. If this ligament is torn, the biceps tendon is free to jump or slip out of its groove, irritating and eventually inflaming the biceps tendon. This ligament comes from the rotator cuff, and is often damaged in rotator cuff tears.

What symptoms can occur?

Patients generally report the feeling of a deep ache directly in the front and top of the shoulder which may radiate down the arm. Pain is usually made worse with overhead activities. Resting the shoulder generally eases pain.

The arm may feel weak with attempts to bend the elbow or when twisting the forearm into supination (palm up). A catching or slipping sensation felt near the top of the biceps muscle may suggest a tear of the transverse humeral ligament.

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Treatment

Non operative

Generally nonsurgical options are the first consideration.

- Rest and Ice – The first step toward recovery is to avoid overhead activity.
- Non-steroidal anti-inflammatory medications – Drugs like ibuprofen and naproxen reduce pain and swelling.
- Steroid injections – Steroids, like cortisone, are very effective anti-inflammatory medicines. Injecting steroids into the tendon can relieve pain. Your doctor will use these cautiously. In rare circumstances, steroid injections can further weaken the already injured tendon, causing it to tear.
- Physiotherapy – Specific stretching and strengthening exercises will restore range of motion and strengthen your shoulder.

Patients who are improving with conservative treatments do not typically require surgery. Surgery may be recommended if the problem continues or when there are other shoulder problems present.

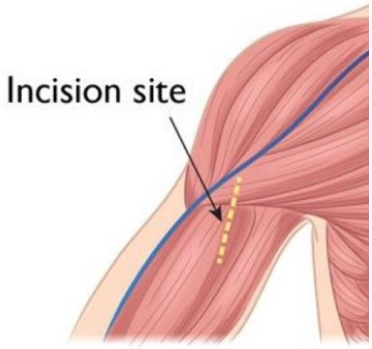
Surgery

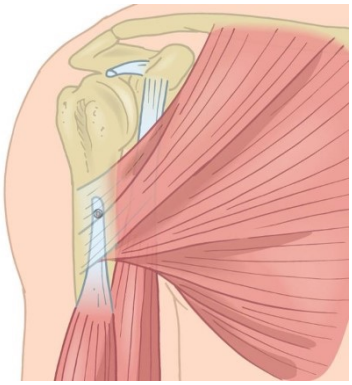
Repair

- Rarely, the biceps tendon can be repaired where it attaches to the shoulder socket (glenoid).

Biceps tenodesis

- In some cases, the damaged section of the biceps is removed, and the remaining tendon is reattached to the upper arm bone (humerus). This procedure is called a biceps tenodesis. Removing the painful part of the biceps usually resolves symptoms and restores normal function.





Tenotomy

- In some patient it may be more suitable to release the damaged biceps tendon from its attachment. This is called a biceps tenotomy. This option is the least invasive, but may result in a Popeye bulge in the arm and has a small risk of cramping and weakness, but most patients have no decrease in function.

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Complications

Some of these can be serious and can even cause death.

General complications of any operation

General complications of any shoulder surgery

- **Pain** levels felt after surgery vary depending on the type of surgery, individual pain thresholds, nature of the problem for which surgery was done and various other factors. Pain beyond 2-3 months may indicate ongoing inflammation which may need injections to help improve.
- **Stiffness** after shoulder surgery is common and occurs as a result of preexisting pathology, surgical scarring and prolonged post-operative protection in a sling. Most stiffness improves by 6 months, however some patients may require injections or further procedures to help the stiffness.
- **Bleeding** during or after surgery is very uncommon, occurring in less than 1% of patients. It is common to have oozing from the arthroscopic wound ports after surgery as the blood-stained sterile water used during surgery drains out.
- **Infection** of the surgical wound is rare with arthroscopic surgery. Early diagnosis of post-operative infection has a significantly better outcome compared to delayed diagnosis. After your operation, you should contact the rooms immediately if you get a temperature, become unwell, notice pus in your wound, or if your wound becomes red, sore or painful.
- **Unsightly scarring** of the skin is uncommon and most surgical scars have disappeared to a thin pale line by one year after surgery. If you are concerned about your scar please discuss treatments to improve scar healing.
- **Nerve injury** is rare (less than 0.5%) with most shoulder operations, but some larger operations have a higher risk and this will be discussed with you by your surgeon.
- **Vascular injury** is very rare (less than 0.5%) after shoulder surgery.
- **Anaesthetic related** complications such as sickness and nausea are relatively common. Heart attacks, lung infections and neurological problems such as strokes are rare, occurring at less than 1 person in 1,000, but have been reported to occur.

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Specific complications of this operation

Tenotomy/Release

- Biceps complications such as cramping, fatigue and weakness are uncommon but can occur.
- Cosmetic deformity in the form of the 'Popeye' deformity often occurs.
- Function and pain relief is often good after surgery.

Tenodesis/Reattachment

- Involves a cut further down the arm, and this can get infected.
- Higher risk of damage to nerves in the region of the cut, this may affect sensation, pain and function around the arm.
- The repair may stretch or fail, leading to similar complications seen in tenotomy.
- Fracture/break of the humerus/arm bone can occur through the area of biceps repair. This is rare in the surgical procedure Mr Mattern uses.

How soon will I recover?

You should be able to go home the same day or the next morning. It can take up to a year to get back enough strength in your shoulder to return to normal activities. Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, ask for advice. You may not get back the same strength that you had before you damaged your shoulder.

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Biceps Tenodesis Protocol

- Note: If a biceps tenodesis is performed as part of a rotator cuff repair, follow the Rotator Cuff Repair Protocol
- For a guide to shoulder exercises please visit www.shoulderdoc.co.uk/article/1014

	Post op
Day 1-4 Weeks Level 1 Exercises Level 2 exercises	• Sling. • Teach postural awareness and scapular setting • Regain scapula & glenohumeral stability working for shoulder joint control rather than range • Core stabiliity exercises (as appropriate) • Finger, wrist and radio ulnar movements • Active elbow flexion & extension in standing as tolerated. • Active shoulder movement as tolerated • **Avoid resisted elbow flexion and forced passive extension**
4-6 Weeks Level 2 exercises	• Wean off sling • Assess kinetic chain control and provide exercises as required • Strengthen rotator cuff muscles
6 Weeks + Level 3 exercises	• Start elbow flexion with light resistance, **as tolerated** • Eccentric biceps exercises with scapula control if required

Milestones

Week 6	Full Active range of shoulder & elbow motion
Week 12	Full active range of elbow and shoulder movement with dynamic scapula stability throughout range (Concentric and eccentric)

Return to functional activities

Return to work	Sedentary job: as tolerated Manual job: 6-12 weeks
Driving	3-6 weeks
Swimming	Breaststroke: 3 weeks Freestyle: 6 weeks
Golf	6 weeks

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Lifting	Light lifting can begin at 3 weeks. Avoid lifting heavy items for 3 months.
Contact Sport	E.g. Horse riding, rugby, football, martial arts, racquet sports and rock climbing: 6-12 weeks*

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ARTHROSCOPIC SUB-ACROMIAL DECOMPRESSION (ASD) +/- ACROMIO-CLAVICULAR JOINT (ACJ) EXCISION, +/- BICEPS TENOTOMY

	Rehabilitation
On Discharge	• Provide advice on sling management • Wean from sling as soon as comfortable • Educate on post-operative pain management • Hand, wrist, elbow and neck ROM (as block wears off) • Teach active assisted exercises in all planes as comfort allows • Postural awareness and scapula control • Thoracic spine ROM • **If a biceps tenotomy has been performed avoid resisted elbow flexion for at least 4 weeks**
1-3 Weeks	• Progress active ROM as comfort allows (closed chain to open chain, short lever to long) • Ensure kinetic chain involvement during all exercises and function • Begin cuff control exercise, progress through range as comfort allows • Ensure good dynamic cuff and scapula control • Monitor for compensatory movement strategies i.e at C spine/T spine
3-6+ Weeks	• Continue to progress active range of movement • Progress strengthening through range incorporating full kinetic chain • **Ensure rehabilitation is functionally specific to patient i.e occupation/sport**

Sling	Sling for comfort
Physiotherapy Follow Up	Within 2 weeks post op

Milestones	
Driving	Once sufficient ROM and strength has been regained and is safe and comfortable to do so
Week 1-3	Can return to sedentary/light work and activities such as swimming
Week 3-6	Full passive range of movement.
Week 6+	Full active range of movement and functional strength through range with good control Full AROM, full strength through range. Can return to sport as able (Not overhead). Can return to manual work
8-12 Weeks	Can return to repeated overhead activities/racquet sport as comfortable under guidance of physiotherapist

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Patient Specific Instructions/Requirements

Linacre Private Hospital
Holmesglen Private Hospital
Frankston Private Hospital