

Biceps Tendinopathy and Long-Head Rupture

A ruptured long head of biceps can ball up into a 'Popeye' bulge in the upper arm.

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What you're feeling

The biceps is the muscle at the front of your upper arm. The long head of its tendon runs up over the top of the arm bone and into the shoulder joint, and this is the part that causes trouble here.

The most common complaint is a deep, nagging **pain at the front of the shoulder**, often a few centimetres below the tip. It can ache when you reach overhead, lift, or carry, and it sometimes radiates down the front of the upper arm. Many people find it hard to point to one exact spot. Because the biceps tendon sits right beside the rotator cuff, this pain very often comes alongside rotator cuff problems, and the two can be difficult to tell apart without an examination.

Sometimes there is a more dramatic event. The worn tendon can snap, usually in older people and often with surprisingly little pain. When this happens, the muscle belly drops down the arm and forms a soft bulge that looks like a small ball or a flexed muscle. This is the classic **“Popeye” sign**. It can be startling to see, but on its own it is rarely as serious as it looks.

What's actually happening

Tendons are tough cords that connect muscle to bone, and like any well-used rope they can fray with time. In **biceps tendinopathy**, the long head tendon becomes inflamed and worn where it travels through a narrow groove at the top of the arm bone and into the shoulder. That wear is what you feel as the front-of-shoulder pain. Because the tendon shares this crowded space with the rotator cuff, the two often wear together, which is why biceps pain and cuff pain so frequently travel as a pair.

If that fraying continues, the tendon can eventually give way completely. When the **long head ruptures**, the muscle is no longer tethered at the top, so it slides down the arm and produces the Popeye bulge. Here is the reassuring part: the biceps actually has two anchors at the shoulder (the long head and the short head), and the

short head stays intact. So when the long head goes, the arm keeps most of its strength, and the change is mainly in appearance.

This is an important distinction. A **proximal** rupture (at the shoulder end) is usually a minor problem. A rupture at the other end of the muscle, at the elbow (a distal biceps rupture), is a very different situation: that one can cause real loss of strength and often needs surgical repair. The bulge can look similar, so it matters which end has actually torn.

What we can do about it

In our clinic, Dr Kieran Hirpara guides patients through a clear pathway that begins with a thorough assessment to confirm the diagnosis. We typically recommend starting with non-surgical care for long-standing issues, reserving surgery only when those measures have not provided enough relief.

For **biceps tendinopathy**, the first steps are simple and non-surgical, and they settle most people:

- **Activity changes:** easing off the overhead and heavy-lifting movements that aggravate it, while keeping the shoulder moving.
- **Physiotherapy:** guided exercises to settle the tendon and rebalance the shoulder, especially when the rotator cuff is involved too.
- **Anti-inflammatory medication:** a tablet to take the edge off pain and inflammation.
- **An injection:** sometimes a corticosteroid injection around the tendon or in the shoulder is used to calm a stubborn flare.

Surgery is reserved for ongoing pain that hasn't settled with these measures. When it is needed, there are two main options. The tendon can be cut so it no longer pulls on the sore area (a **tenotomy**), which often leaves a Popeye bulge but reliably relieves pain. Or it can be re-anchored lower down the arm bone (a **tenodesis**), which keeps the muscle's normal shape and avoids the bulge but involves a longer recovery. These procedures are frequently done at the same time as rotator cuff surgery, since the two problems so often occur together.

For a **proximal long-head rupture**, the usual advice is **no surgery at all**. There is little loss of strength, and the bulge is mainly cosmetic. Some younger or more active people, or those bothered by the appearance or by muscle cramping, may choose a re-anchoring procedure, but for most people leaving it alone is the right call.

What to expect

Most biceps tendinopathy improves with patience and the right exercises. It can be slow (a few months rather than a few weeks), but the outlook is good, and the majority avoid surgery altogether. When the biceps problem is part of a wider rotator cuff issue, recovery follows the cuff, and treating both together gives the best result.

If you have had a proximal long-head rupture and decided against surgery, you can expect the initial soreness to fade over a few weeks, your strength to return to near normal, and the Popeye bulge to remain as a permanent but harmless reminder. It does not get worse over time, and it does not need to be fixed.

When to see someone

- **Front-of-shoulder pain that won't settle**, especially with overhead reaching or lifting: worth assessing, as it often signals a biceps or rotator cuff problem that responds well to treatment.
- A **sudden bulge in the upper arm that comes with weakness**: this needs to be looked at to confirm it is the harmless long head at the shoulder and **not** a tear at the elbow, which is a different injury that may need surgery.
- A **rupture in a younger or active person**: even a proximal one is worth reviewing, both to be sure of the diagnosis and to discuss whether repair is worthwhile for you.
- **Persistent biceps cramping or aching** after a known rupture: usually minor, but can be treated if it troubles you.