

## Why shoulder pain keeps coming back

According to a study published in the journal BMC Medicine the reason shoulder pain keeps coming back is that the common diagnosis of shoulder pain, impingement syndrome is incorrect, therefore the wrong cause is being treated. Instead this study found that the most common cause of (chronic) long term shoulder pain is (myofascial) trigger points, which are those lumps in muscles therapists find. Trigger points cause shoulder pain by two methods: i) directly causing pain, and ii) indirectly causing pain by altering the biomechanics of the shoulder joint. Based upon these findings the way to prevent shoulder pain from coming back is to treat the trigger points.

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## What are trigger points

Trigger points are those tender lumps in muscles that massage therapists find. Scientists have found that they are parts of the muscle that have gone into spasm or cramp and causes a chain reaction which causes them to “lock on” and continue to develop. They start as small lumps that are only evident when a therapist presses upon them and causes pain, but they can continue to develop until they can hurt all the time. For more information about trigger points please see our article [Trigger point basics](#). As discussed, trigger points can cause pain either directly or indirectly.

### Trigger points causing pain directly

Initially trigger points only shoot pain when pressed upon, but as they develop or are aggravated they can shoot pain without being provoked. Scientists have extensively mapped where individual trigger points shoot (refer) pain to. A large number of these refer pain to the shoulder. The accompanying picture is a diagram of trigger points and their pain referral patterns taken from the journal article.

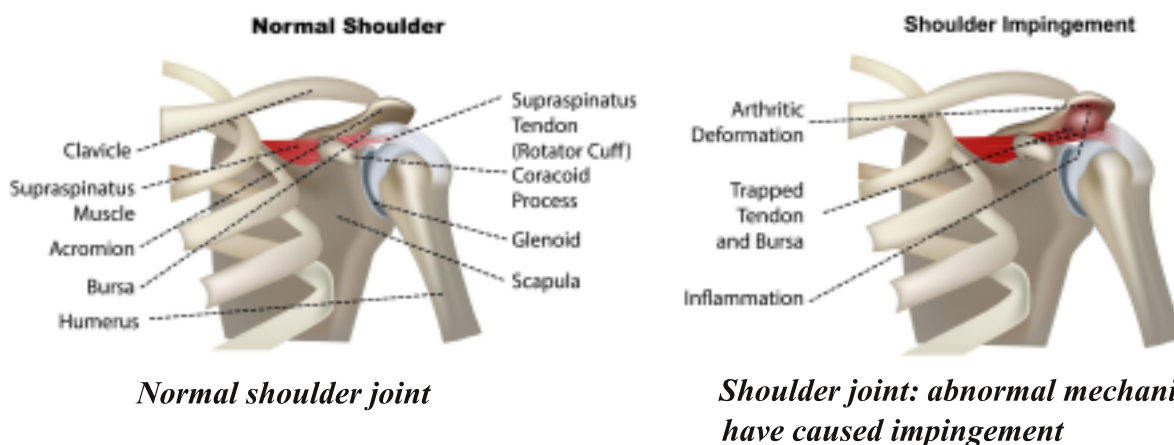


*Shoulder muscle trigger point referral: "x" marks the trigger points, the red is the pain*

## Trigger points causing pain indirectly

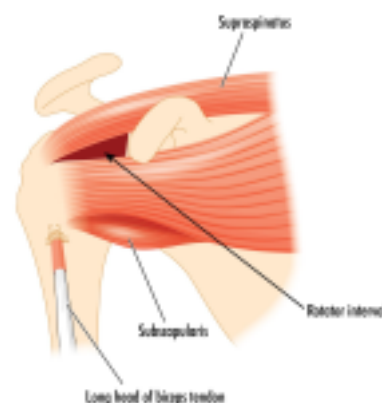
### *Shoulder impingement*

Earlier we mentioned impingement syndrome of the shoulder. This is where the normal smooth coordinated movement of the shoulder joint is altered, causing parts of the joint to be abnormally stressed or pinched. The accompanying diagrams show a normal shoulder joint, and one whose movement has been altered causing the structures at the top of the joint to be pinched. **As we will show, trigger points can alter shoulder joint movement causing impingement to occur.**



### *Control of shoulder joint movement*

As you can see on the previous diagram the shoulder joint has a fairly large ball sitting on a very shallow socket which makes it incredibly unstable. The way your shoulder joint keeps that large flat ball sitting in that shallow socket is by having muscles hold it there and control the movement. The most important of these muscles are the rotator cuff muscles.



### *Trigger points cause abnormal control*

Even if not directly causing pain, when a muscle contains trigger points it:

- tightens abnormally
- has reduced strength
- quickly fatigues, and
- responds slowly

Therefore, even when not directly causing pain trigger points in the shoulder muscles will affect the control and coordination of the shoulder joint, causing abnormal stress and pinching. This was observed in a study of the [neurological control of shoulder muscles](#). **Note: we mentioned that “impingement syndrome” was a common diagnosis of shoulder problems. However, without correctly identifying the trigger points as the underlying cause of the abnormal shoulder mechanics doctors merely treat the symptoms.**

## **How to treat trigger points**

Please follow the links below for excellent resources on how to treat trigger points.

[Trigger point basics](#)

[Trigger point treatment: deactivate or eliminate](#)

[Video: How to treat trigger point pain](#)

## **Reference**

*Bron et al. Treatment of myofascial trigger points in patients with chronic shoulder pain: a randomized, controlled trial. BMC Medicine 2011, 9:8*

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