

## Supraspinatus Tendonitis

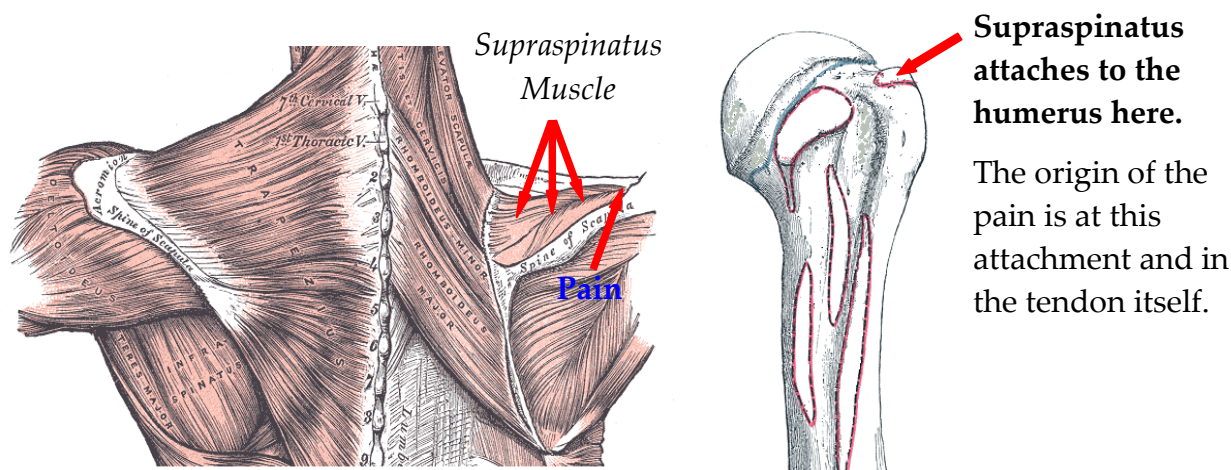
The tendon of a muscle in the upper shoulder has become inflamed and sore near its attachment to the upper arm bone.

### (a) What is Supraspinatus Tendonitis?

*Supraspinatus tendonitis* is inflammation of one of the supraspinatus tendons, specifically the tendon attaching the supraspinatus muscle to the upper part of the *humerus* (the upper arm bone).

The location of the muscle in the shoulder, the area where pain is felt, and where supraspinatus attaches to the humerus are shown in Figure 1 below.

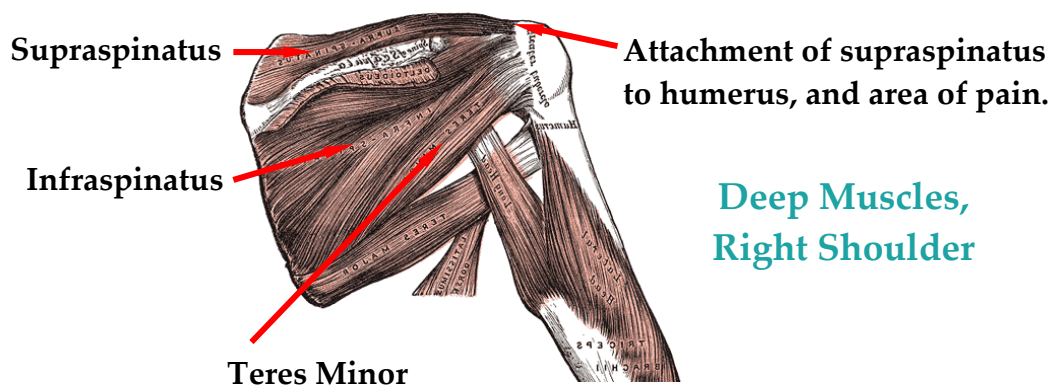
**Figure 1: Supraspinatus Tendonitis and Attachment to Humerus**



### (b) Who Develops This Problem?

Anyone can develop supraspinatus tendonitis. It is however common enough in swimmers who are training heavily. The tendon becomes impinged during the exit and recovery phase of the stroke. As a swimmer becomes tired, it becomes more difficult to lift the arm out of the water and to keep it above the surface of the water as the arm is drawn towards the commencement of the next stroke. Specifically, two muscles become fatigued; *infraspinatus* and *teres minor*. These two muscles are shown in Figure 2 below.

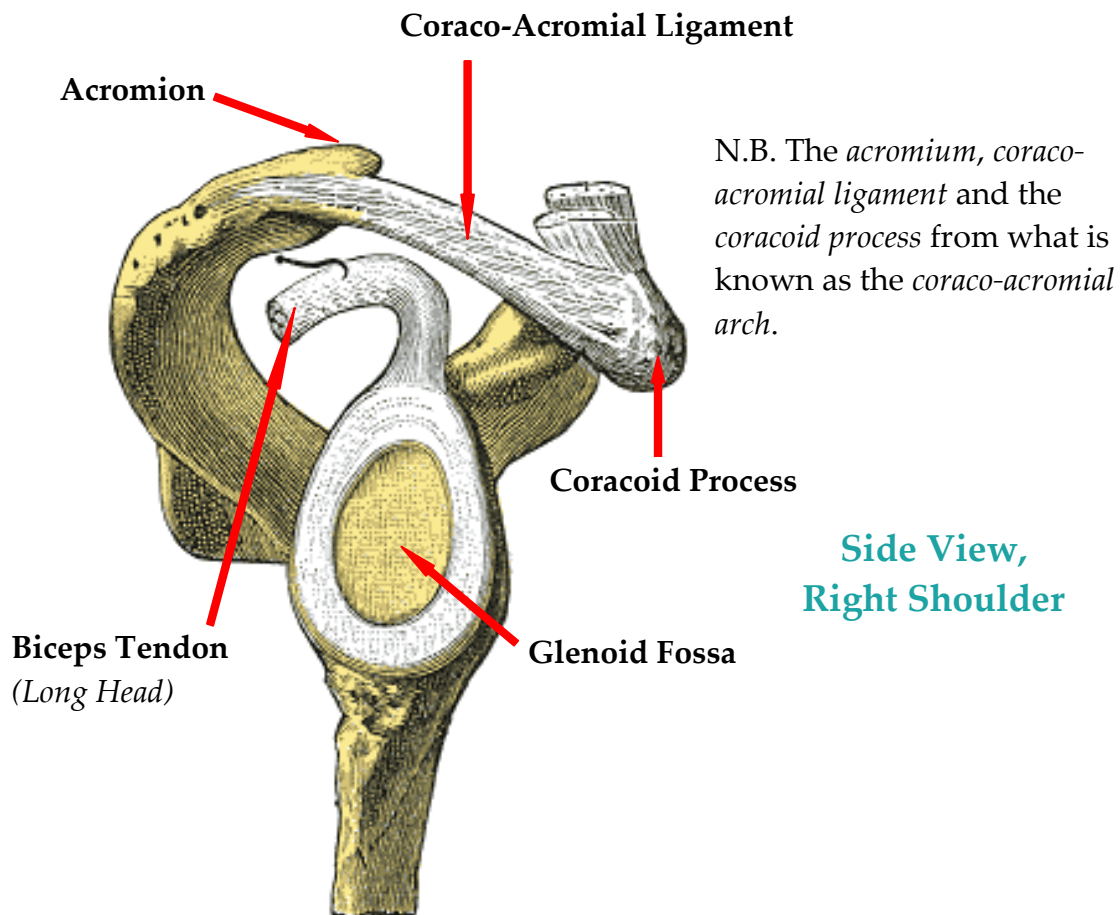
**Figure 2: Muscles in Development of Supraspinatus Tendonitis**



These two muscles rotate the humerus (upper arm bone) *outwards*, but they also *pull* the humerus *downwards* and into the socket of the shoulder joint (called the *glenoid fossa*). When the muscles become fatigued, the humerus migrates slightly *outwards* and *upwards*, impinging the *supraspinatus tendon* against the *coraco-acromial arch*.

The *coraco-acromial arch* is made up of the smooth under-surfaces of the *acromion*, the *coracoid process* and the *coraco-acromial ligament*. This is the basic structure which prevents the humerus from displacing vertically *upwards* and *out* of its socket. The structures forming the coraco-acromial arch are shown in Figure 3 below.

**Figure 3: Coraco Acromial Arch and Glenoid Fossa (of the Shoulder Blade)**



### (c) Signs and Symptoms

You will experience pain during movements of the shoulder, particularly if the arm is rotated externally (outwardly) and/or abducted (moved away from the body to the side). Tenderness will be felt if the practitioner applies direct pressure to the most upper and slightly anterior (front) part of the shoulder, or abducts your arm between about 70° and 120°.

### (d) Treatment

Your practitioner will make sure all muscles involved in precipitating the problem are loosened. Other than that the best things you can do are to rest and apply ice or heat to the area twice per day. When the inflammation has settled, consult with your practitioner who may provide strengthening exercises to prevent recurrence.