

Supraspinatus Tendinopathy and Acupuncture

What is Supraspinatus Tendinopathy?

Supraspinatus tendinopathy is a condition that affects the supraspinatus tendon, one of the four tendons that make up the rotator cuff in the shoulder. The supraspinatus tendon connects the supraspinatus muscle to the top of the humerus (upper arm bone) and is responsible for helping lift the arm away from the body, as well as stabilizing the shoulder joint.

The supraspinatus muscle is located on the top of the shoulder blade (scapula). Its name comes from its location: "supraspinatus" means "above the spine," referring to the spine of the scapula. The muscle runs across the shoulder joint and attaches to the greater tuberosity of the humerus through the supraspinatus tendon. The supraspinatus tendon is crucial for shoulder mobility and stability, making it essential for everyday activities like lifting, throwing, and reaching overhead. Injuries to this tendon, particularly from overuse or aging, can cause significant discomfort and impair function.

The supraspinatus tendon plays an important role in shoulder movement and stability. Its main functions include:

1. **Arm Abduction:** It helps initiate the lifting of the arm away from the body (abduction), especially during the first 15-30 degrees of movement.
2. **Shoulder Stability:** The tendon helps stabilize the shoulder joint by holding the humeral head (the ball of the shoulder joint) into the shallow shoulder socket (glenoid), preventing dislocation during movement.
3. **Rotator Cuff Contribution:** Along with the other rotator cuff muscles (infraspinatus, teres minor, and subscapularis), the supraspinatus helps keep the shoulder joint stable while allowing a wide range of motion.

What Happens in Supraspinatus Tendinopathy?

Supraspinatus tendinopathy involves degeneration or damage to the tendon, typically due to overuse or repetitive stress. This can lead to changes in the structure of the tendon, like microtears, collagen disorganization, or thickening of the tendon fibers.

Unlike tendinitis (which is focused on inflammation), tendinopathy is more about the long-term breakdown of the tendon's tissue. As the tendon degenerates, it becomes weaker,

which can lead to pain, discomfort, and reduced function of the shoulder. It's typically associated with wear and tear over time rather than acute injury

Common Causes of Supraspinatus Tendinopathy

1. **Aging:** As we age, tendons naturally become weaker and less elastic, increasing the likelihood of degeneration.
2. **Poor Posture:** Slouching or poor shoulder mechanics can put excess strain on the supraspinatus tendon.
3. **Acute Injury:** In some cases, an initial injury or trauma to the shoulder can lead to changes in the tendon over time.
4. **Repetitive Movements:** Activities that involve repeated overhead motions, especially sports.

Sports with High Incidences of Supraspinatus Tendinopathy

Volleyball, tennis & racquet sports, swimming, baseball & softball, basketball, weightlifting & CrossFit, and golf contribute to a high degree of supraspinatus tendinopathy.

A recent case of supraspinatus tendinopathy was highlighted in a 2024 case report involving a 21-year-old male volleyball athlete. The athlete presented with right shoulder pain and limited range of motion, particularly during overhead movements like serving and spiking. Diagnosis confirmed supraspinatus tendinopathy ([Dangare, 2024](#)).

Home Strategies for Supraspinatus Tendinopathy

- Stop or modify sports or work tasks that aggravate symptoms (e.g., throwing, painting, heavy lifting).
- Ice therapy: Apply ice packs to the shoulder for 15–20 minutes, 2–3 times daily (especially after activity).
- NSAIDs (e.g., ibuprofen or naproxen): Short-term use can help reduce pain and inflammation (if tolerated and approved by a doctor)
- Gentle Mobility Exercises:

1. Pendulum Swings

- Lean forward, let your affected arm dangle
- Gently swing it in small circles or side-to-side.
- seconds x 2–3 rounds

2. Wand Flexion

- Use a broomstick or cane.
- Lie on your back, hold the stick with both hands, and use your good arm to lift the sore arm overhead slowly.
- 10–15 reps x 2 sets

3. Cross-Body Shoulder Stretch

- Use your good arm to pull the sore arm across your chest.
- Hold for 20–30 seconds, feel a stretch—not pain.
- 2–3 reps

4. Isometric Shoulder Abduction

- Stand next to a wall with your elbow bent at 90°
- Gently press your elbow out into the wall without moving your arm.
- Hold 5–10 seconds.
- 5–10 reps x 2 sets

5. Scapular Retraction

- Squeeze your shoulder blades together as if pinching a pencil between them.
- Hold for 5–10 seconds.
- 10–15 reps x 2 sets

6. External Rotation with Resistance Band

- Anchor a band at waist height.
- With elbow bent at 90°, pull band outward away from your body.
- Keep elbow close to your side.
- 10–15 reps x 2 sets

7. Full-Can Exercise

- Hold light weights (0.5–2 kg).
- Raise arms at a 30–45° angle in front of you, thumbs up ("full-can" position), to shoulder height.
- Lower slowly.
- 10–12 reps x 2 sets

8. Wall Push-Ups

- Stand arm's length from a wall and perform push-ups keeping core engaged.
- Builds scapular and shoulder control.
- 10 reps x 2 sets

9. Wall Crawls (flexion and abduction): Use fingers to “walk” your hand up a wall.

Acupuncture's Application

Along with the following common approaches of rest and activity modification, physical therapy, and ice and heat, acupuncture can reduce pain, improve tendon health, and restore function.

Pain Reduction: Acupuncture can stimulate the release of endorphins and enkephalins, which are natural painkillers produced by the body.

Improved Blood Flow: Inserting needles at specific points may increase local microcirculation around the shoulder, which could support tendon healing by improving the delivery of oxygen and nutrients.

Reduction of Inflammation: Some studies suggest acupuncture can reduce levels of pro-inflammatory cytokines, potentially calming down localized inflammation in the tendon.

Muscle Relaxation: Trigger point acupuncture or dry needling can release tension in the deltoid, trapezius, and rotator cuff muscles, which may be compensating for the weakened supraspinatus.

Nervous System Modulation: Acupuncture affects the autonomic nervous system, potentially promoting relaxation and improved neuromuscular coordination.

References

Dangare MS, Shedge SS, Ramteke SU. Rehabilitation of Supraspinatus Impingement in a Volleyball Athlete: A Case Report. Cureus. 2024 Jan 8;16(1):e51869. doi: 10.7759/cureus.51869. PMID: 38327912; PMCID: PMC10849064.

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