

# Rotator Cuff Related Shoulder Pain



AcePhysio

acephysio.org



@Acephysio

**Rotator Cuff Related Shoulder Pain (RCRSP):** spectrum of rotator cuff pathology. Tears can occur with trauma (such as with shoulder dislocation) or can be degenerative (such as with repetitive overhead activity). RCRSP also encompasses shoulder impingement, subacromial bursitis, rotator cuff syndrome, and rotator cuff tendonitis .

## Causes:

- Acute traumatic event (fall or powerlifting)
- Repetitive or vigorous overhead activity (such as throwing a baseball or painting)
- Poor biomechanics
- Muscular imbalance
- Chronic degeneration

## Pathophysiology:

- Age-related degeneration → with age, blood supply to the rotator cuff tendon decreases → impaired ability to repair minor injuries
- Degenerative-microtrauma model: age-related tendon degeneration & chronic microtrauma leads to partial tendon tears - can develop into full-thickness tear
- Inflammatory cells are recruited & oxidative stress leads to tenocyte apoptosis → cycle of further tendon degeneration
- Supraspinatus tendon is most commonly affected where it passes beneath the coracoacromial arch

## Presentation

- **Anterolateral shoulder pain**, often radiating down the arm
- **Arc of pain** - pain while lowering arm
- Night pain - rolling onto affected shoulder/ overuse of deltoid
- **Weakness of shoulder abduction, flexion or external rotation**
- Compressed branches of the brachial plexus may elicit numbness
- Loss of active range of motion due to pain inhibition

## Management

- **Advice and education** - provide re-assurance, educate about RCRSP, explain prognosis, and discuss further management options as per shared decision-making
- **Progressive shoulder loading exercises** - no evidence to support one type of exercise (eccentric, concentric or isometric) as being superior to others - integrating kinetic chain exercises may enhance scapular muscle recruitment & reduce demand on RC muscles
- **Lifestyle advice** - lifestyle change advice about weight loss and smoking - these factors are associated with tendinopathy
- **Avoid nocebic language** - avoid the use of biomedical terminology as it may impact on patient engagement and potential treatment outcomes
- Corticosteroid injection - consider for patients with highly irritable and constant shoulder pain - can provide short-term benefit from 4-8 weeks but no significant benefit at 3/6/12 months
- Effective pain relief - oral NSAIDs may provide short term pain relief

## Diagnosis

- Pain and weakness during **Gerber's lift off test** - suggests subscapularis tear
- Pain and weakness during **Belly's press test** - suggests subscapularis tear
- Pain during **Neer's impingement** or **Hawkins' tests** - suggests supraspinatus or long head of biceps brachii tear
- Pain during **Empty can test** - suggests supraspinatus tear
- Pain during **external rotation test** - suggests infraspinatus/teres minor tear
- Absence of passive range loss in any direction, no change in symptoms on neck movements, and familiar pain on shoulder resistance testing



## Want to learn more?

With AcePhysio the learning journey doesn't stop here! Take a look at our further reading recommendations below to become an expert in RCRSP:

1. Pieters, L., Lewis, J., Kuppens, K., Jochems, J., Bruijstens, T., Joossens, L. and Struyf, F., 2020. An Update of Systematic Reviews Examining the Effectiveness of Conservative Physical Therapy Interventions for Subacromial Shoulder Pain. *Journal of Orthopaedic & Sports Physical Therapy*, 50(3), pp.131-141.
2. Lewis J. Rotator cuff related shoulder pain: assessment, management and uncertainties. *Manual therapy*. 2016 Jun 1;23:57-68.
3. Coombes BK, Bisset L, Vicenzino B. Efficacy and safety of corticosteroid injections and other injections for management of tendinopathy: a systematic review of randomised controlled trials. *Lancet*. 2010 Nov 20;376(9754):1751-67.