

# Shouldering Independence with a Rotator Cuff Tear: A Systematic Review

Angelia Abad, OTS, Eiyana Greene, OTS, Brian Lieu, OTS, Abby Sleight, OTS

Hawai'i Pacific University, Doctor of Occupational Therapy Program, Honolulu, Hawai'i

## Research Question

What are the most effective interventions for adults with a complete rotator cuff tear to return to independence with ADLs?

## Overview of Condition

**Complete Rotator Cuff Tear:** The tendon is separated from the bone or torn.

**Macro-trauma:** Sudden single-traumatic incidents, like when falling on an outstretched hand, can cause an acute tear. Repetitive overhead activities or heavy lifting can cause damage to the tendon. People like construction workers and movers are more likely to have rotator cuff injuries.

**Micro-trauma:** Aging and repetitive overhead activities, like throwing a baseball or prolonged heavy lifting, can cause tendon degeneration coupled with insufficient healing because of aging.

**Symptoms:** Shoulder pain and weakness in the shoulder when lifting or rotating the arm.

**Precautions:** Limit heavy lifting and overhead activities. Avoid lifting more than five pounds. Do not put weight/lie on the affected shoulder.

## OT Assessments/Special Tests

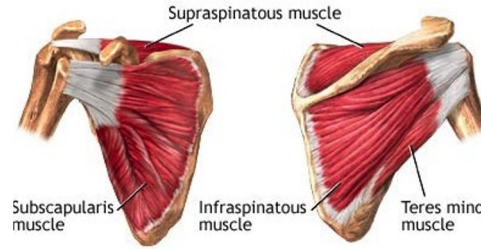
- Numerical Pain Rating Scale
- Shoulder Pain and Disability Index
- Disabilities of the Arm, Shoulder and Hand; Shoulder Pain and Disability Index

## Evidence-Based Interventions

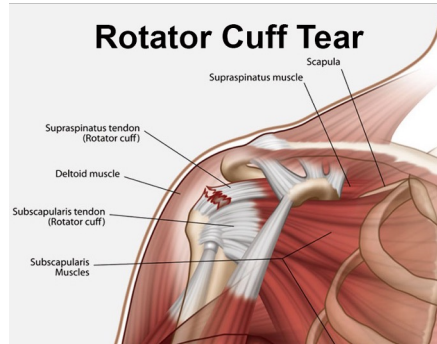
**Strengthening Exercises:** Strengthening exercises are crucial because they help restore shoulder mobility, improve muscle strength, and enhance functional use of the arm. Evidence shows that a structured exercise program can significantly reduce pain and improve shoulder function in patients with rotator cuff tears (Salom-Moreno et al., 2017).

**Manual Therapy:** Manual therapy can help reduce pain, increase joint mobility, and improve the overall function of the shoulder. Studies have demonstrated that manual therapy, when combined with therapeutic exercises, can lead to better outcomes in terms of pain reduction and functional improvement (Lin et al., 2022).

Rotator cuff muscles



Anterior shoulder      Posterior shoulder



HEP2GO



References



## Results

Five studies met the inclusion criteria. The articles were assessed according to their risk of bias, level of evidence, quality, and outcome measures. The systematic review included five studies that contained relevant information regarding effective interventions used for adults with a complete rotator cuff tear to return to independence with ADLs. The information from these articles were divided into two themes: the effectiveness of adding physical agent modalities (PAMs) to strengthening exercises and the use of interventions to reduce shoulder pain.

## Discussion and Implications for OT

- Rotator cuff tear is a common injury, and so occupational therapists need to be prepared to competently treat it by pulling from a collection of effective rehabilitation methods.
- Incorporating PAMs, manual therapy, and strengthening exercises with interventions can potentially be beneficial for adults with a complete rotator cuff tear.
- There is a need for studies involving more diverse patient populations and larger sample sizes to compare interventions effectively.
- These interventions are identified as beneficial in enabling individuals to return to activities of daily living (ADLs).

## Method

A broad search of the literature occurred between May 9, 2024, and May 17, 2024. An additional search was conducted May 24, 2024, to ensure all relevant research was included. The inclusion criteria for studies in the systematic review were as follows: peer-reviewed, published in English, and dated between 2014-2024. Exclusion criteria, in addition to those studies that did not meet the inclusion criteria, included articles that were systematic reviews, scoping reviews, dissertations, and presentations. A search for relevant literature was completed using electronic databases through Hawai'i Pacific University's online library database. Search terms included *rotator cuff tear* and *occupational therapy*, as well as combinations of these terms. The initial search included 87 articles related to the research topic. Four independent reviewers completed the screening and selection of the studies, assessed their quality, and extracted the data.