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RAPID RESEARCH

August 2021

Inside This Week: The Rotator Cuff

-
- ✓ Exercise Therapy for Irreparable Rotator Cuff Tears

 - ✓ Passive and Active Exercise Therapy After Surgical Rotator Cuff Repair

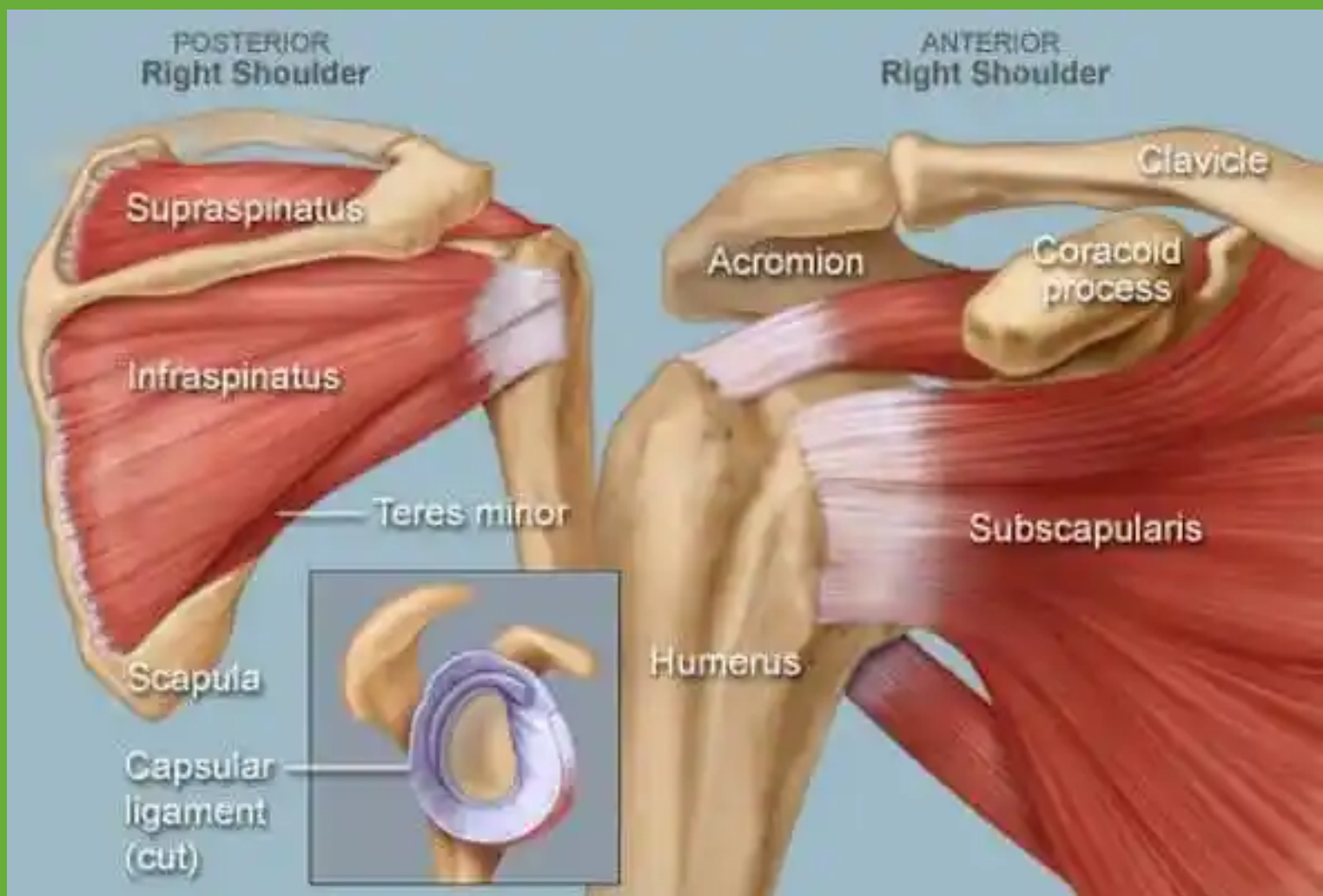
 - ✓ Prevention of Shoulder Injuries in Overhead Athletes



EXERCISE THERAPY FOR IRREPARABLE ROTATOR CUFF TEARS

[Click for Full Text
\(Christensen et al.
2016\)](#)

This study examined the effect of a neuromuscular exercise program for patients with irreparable rotator cuff ruptures.



KEY FINDINGS

24 patients with rotator cuff tears successfully completed treatment.

Complete rupture of supraspinatus tendon (All)

Rupture of the infraspinatus tendon (All; 95% complete)

Subscapularis tendon rupture (6)

Oxford Shoulder Scores **Significantly Improved at:**

Baseline to 3 months; Baseline to 5 months; 3 months to 5 months

Pain levels **improved significantly.**

Range of motion **increased significantly for abduction**

Strength measured with the hand-held dynamometer **showed significant increases for abduction and flexion at 45 and 90°.**

Significant improvements for **quality of life scores after 5 months.**

MAIN TAKEAWAYS

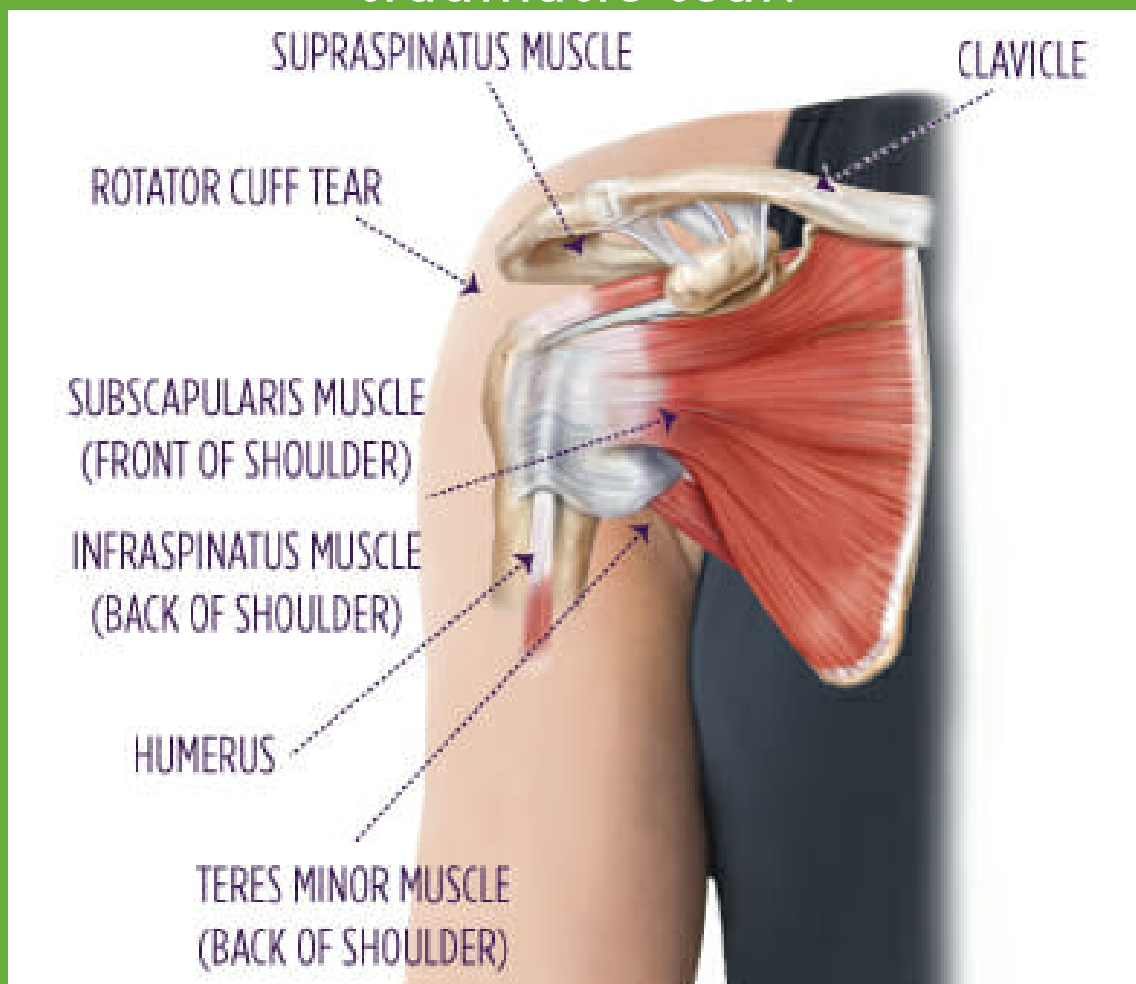
5 months of exercise therapy focusing on strengthening the rotator cuff improved patient-reported function, quality of life, pain, and strength.

Exercise therapy is **beneficial and should be offered to patients with rotator cuff rupture** when considering non-operative management.

PASSIVE AND ACTIVE EXERCISE THERAPY AFTER SURGICAL ROTATOR CUFF REPAIR

[Click for Full Text](#)
([Hougs Kjær et al.](#)
[2021](#))

This study examined the effect of a progressive rehab strategy on pain, physical function and quality of life compared to usual care (that limits tendon loading in the early postoperative phase) in patients who have a rotator cuff repair of a traumatic tear.



KEY FINDINGS

82 patients were **randomized to 2 groups:**

Early active movement (AM) (41)

No active movement (NAM) (41).

At 12 weeks, there was **no significant difference** between the groups in the change in the WORC score.

No between-group difference for the secondary outcomes:

WORC score at 1 year, DASH score, pain, range of motion, and strength at 12 weeks and 1 year.

Both groups showed **significant improvements over time in all outcomes.**

In total, there were **13 re-tears (16%)** at 1-year follow-up:

6 in the AM group and 7 in the NAM group.

MAIN TAKEAWAYS

Patients who receive 12 weeks of Early Active Rehab **did not benefit more** in shoulder function, pain, and quality of life than those receiving usual care.

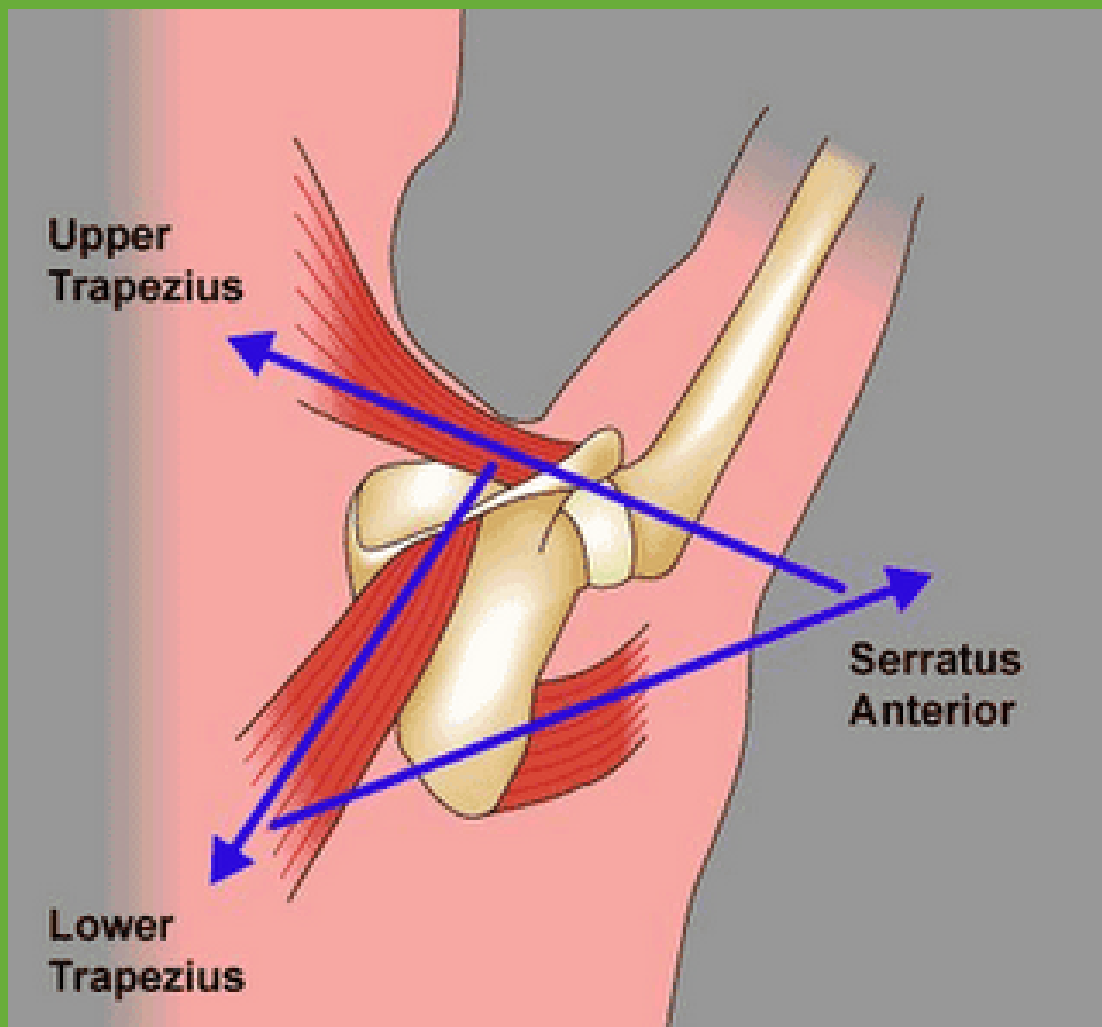
This was true in both the **short & long term.**

In addition, there was **no difference between the groups in the number of re-tears.**

PREVENTION OF SHOULDER INJURIES IN OVERHEAD ATHLETES

[Click for Full Text](#)
[\(Cools et al. 2015\)](#)

This research defined 3 risk factors that may form the basis for recommendations for the prevention of recurrent shoulder injuries and return to play after injury.



KEY FINDINGS

To create a scientific basis for the **prevention of recurrent injuries in overhead athletes, 4 steps are needed:**

- (1) Risk factors need to be defined;
- (2) Established risk factors used as return-to-play criteria
- (3) Measured using reliable & valid assessment tools.
- (4) Preventative training programs need to be designed and implemented.

3 risk factors were defined:

Glenohumeral internal-rotation deficit (GIRD);

Rotator cuff strength

Scapular dyskinesia

MAIN TAKEAWAYS

Possible risk factors include:

Internal rotation deficit

Rotator cuff weakness

Scapular performance

Interventions should focus on:

Stretching the posterior shoulder capsule,

Strengthening the posterior cuff.

Restoring flexibility & muscle balance of scapular muscles.

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