

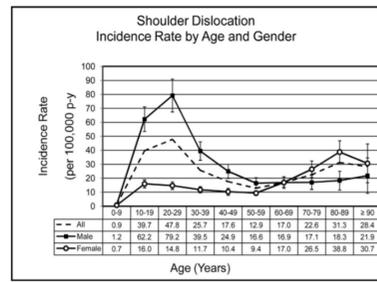
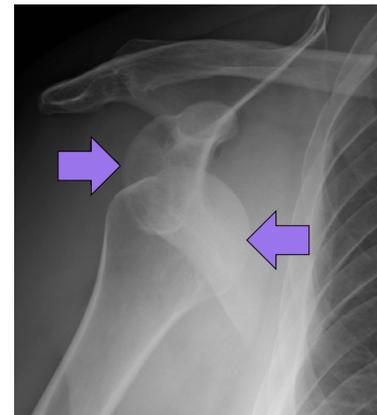
Effectiveness of rehabilitation interventions in older adults treated non-operatively following anterior shoulder dislocation

Alison F.L. Saum, Erin E. Smith, Mateusz J. Zapotoczny, Amee L. Seitz

Department of Physical Therapy & Human Movement Sciences, Feinberg School of Medicine, Northwestern University, Chicago, IL

Background

- Anterior shoulder dislocation is a separation of the humerus from the glenoid. (Figure 1)
- Peak incidence in shoulder dislocation occurs at the 3rd and 9th decades. (Figure 2)¹
- There is a high recurrence rate in young adults under the age of 30 years due to conclusive evidence from RCT's stating surgery results in reduced recurrence compared to rehabilitation
- There is no conclusive evidence on the effectiveness of treatments in older adults.



Purpose

- To determine the effectiveness of rehabilitation in older adults (over the age of 30) following an anterior shoulder dislocation.

Methods

- A literature search of relevant databases was completed with assistance from Master Level Research Assistant. (Refer to Flow Diagram of Search Process)
- During abstract screening, each article was independently reviewed by two reviewers with established reliability (k >0.80).
- Inclusion criteria were: articles in English with any study type, individuals with instability, glenohumeral/shoulder joint dislocation or subluxation. Exclusion criteria were: instability with concomitant fracture, rotator cuff tear, any neurologic disorder, post-surgical, chronic locked dislocations, luxatio erecta, isolated SLAP lesions, voluntary dislocations, or impingement, no separately reported outcomes of subjects at least 30 years of age
- Two independent reviewers critically appraised each article to determine the level of evidence and study quality using the PEDro scale.

Flow Diagram of Search Process

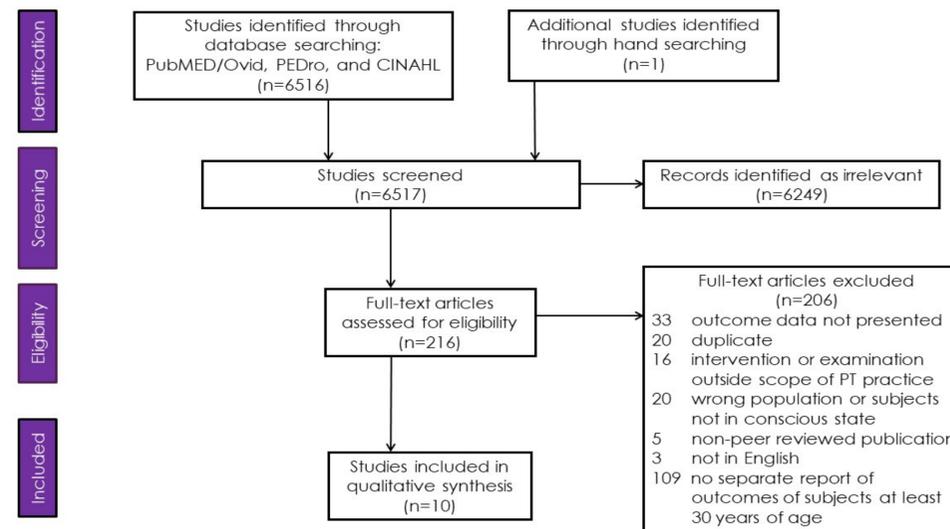


Table 1. Results of PEDro Quality Assessment

Author	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Criterion 6	Criterion 7	Criterion 8	Criterion 9	Criterion 10	Criterion 11	Total
Brostrom (1992)	●	●						●	●			5
Heidari (2014)	●	●	●	●				●	●	●	●	8
Hovellius (1987)		●						●	●	●		4
Hovellius (2008)	●			●					●	●		4
Itoi (2007)	●			●					●	●		4
Itoi (2013)	●	●		●					●	●		5
Kiviluto (1980)	●							●	●	●		4
Liavaag (2011)	●	●	●	●				●	●	●		7
Naughton (2004)	●								●	●	●	5
Robinson (2006)	●								●	●	●	4

Results

- There were no studies only focused on older adults.
- Of the 10 studies, there were over 1,000 subjects who met inclusion criteria.
- Level 2 studies reported separate outcomes for older adults based on immobilization position.
- 3 studies suggest one-week immobilization does not increase recurrence rate.
- 1 study reported higher recurrence with patients immobilized in adduction and internal rotation (44.8%) compared to abduction and external rotation position (3.8%) in older adults 31-40 years old.
- 1 prospective cohort reported the probability of recurrent instability older adults aged 30-35 was greater in males (29-41%) compared to females (13-19%) while younger adults had higher recurrent instability overall.
- Quality of included articles was low (Mean PEDro score: 4.9/11).

Limitations

- All studies had a high risk of bias.

Conclusions

- Level II evidence suggests reduced recurrence with immobilization in adduction and internal rotation in older adults, but no difference with longer duration of immobilization (3 weeks).
- Nonoperative rehabilitation consisting of typical post-operative protocol following an anterior dislocation is most successful in older female adults with recurrence of less than 20% supported by level III study.
- **Clinical Relevance:**
 - Nonoperative rehabilitation with traditional sling use limited to 1 week followed by progressive therapeutic active interventions is recommended to reduce recurrence in older adult dislocators.
 - High quality research on the effectiveness of interventions for older adults following anterior dislocation is necessary.

References

1. Zacchilli MA, & Owens BD. Epidemiology of shoulder dislocations presenting to emergency departments in the United States. *The Journal of Bone and Joint Surgery*. 2010;92:542-9.