

Effectiveness of passive physical modalities for shoulder pain: systematic review by the Ontario protocol for traffic injury management collaboration.

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BACKGROUND: Shoulder pain is a common musculoskeletal condition in the general population. Passive physical modalities are commonly used to treat shoulder pain. However, previous systematic reviews reported conflicting results.

PURPOSE: The aim of this study was to evaluate the effectiveness of passive physical modalities for the management of soft tissue injuries of the shoulder.

DATA SOURCES: MEDLINE, EMBASE, CINAHL, PsycINFO, and the Cochrane Central Register of Controlled Trials were searched from January 1, 1990, to April 18, 2013.

STUDY SELECTION: Randomized controlled trials (RCTs) and cohort and case-control studies were eligible. Random pairs of independent reviewers screened 1,470 of 1,760 retrieved articles after removing 290 duplicates. Twenty-two articles were eligible for critical appraisal. Eligible studies were critically appraised using the Scottish Intercollegiate Guidelines Network criteria. Of those, 11 studies had a low risk of bias.

DATA EXTRACTION: The lead author extracted data from low risk of bias studies and built evidence tables. A second reviewer independently checked the extracted data.

DATA SYNTHESIS: The findings of studies with a low risk of bias were synthesized according to principles of best evidence synthesis. Pretensioned tape, ultrasound, and interferential current were found to be non-effective for managing shoulder pain. However, diathermy and corticosteroid injections led to similar outcomes. Low-level laser therapy provided short-term pain reduction for subacromial impingement syndrome. Extracorporeal shock-wave therapy was not effective for subacromial impingement syndrome but provided benefits for persistent shoulder calcific tendinitis.

LIMITATIONS: Non-English studies were excluded.

CONCLUSIONS: Most passive physical modalities do not benefit patients with subacromial impingement syndrome. However, low-level laser therapy is more effective than placebo or ultrasound for subacromial impingement syndrome. Similarly, shock-wave therapy is more effective than sham therapy for persistent shoulder calcific tendinitis.