

# Frozen shoulder: the effectiveness of conservative and surgical interventions--systematic review.

*Favejee MM, Huisstede BM, Koes BW.*

Department of Rehabilitation Medicine, Erasmus University Medical Center, Rotterdam, The Netherlands.

Br J Sports Med. 2011 Jan;45(1):49-56. Epub 2010 Jul 20.

## Abstract

**BACKGROUND:** A variety of therapeutic interventions is available for restoring motion and diminishing pain in patients with frozen shoulder. An overview article concerning the evidence for the effectiveness of these interventions is lacking.

**OBJECTIVE:** To provide an evidence-based overview regarding the effectiveness of conservative and surgical interventions to treat the frozen shoulder.

**METHODS:** The Cochrane Library, PubMed, Embase, Cinahl and Pedro were searched for relevant systematic reviews and randomised clinical trials (RCTs). Two reviewers independently selected relevant studies, assessed the methodological quality and extracted data. A best-evidence synthesis was used to summarise the results.

**RESULTS:** Five Cochrane reviews and 18 RCTs were included studying the effectiveness of oral medication, injection therapy, physiotherapy, acupuncture, arthrographic distension and suprascapular nerve block (SSNB).

**CONCLUSIONS:** We found strong evidence for the effectiveness of steroid injections and laser therapy in short-term and moderate evidence for steroid injections in mid-term follow-up. Moderate evidence was found in favour of mobilisation techniques in the short and long term, for the effectiveness of arthrographic distension alone and as an addition to active physiotherapy in the short term, for the effectiveness of oral steroids compared with no treatment or placebo in the short term, and for the effectiveness of SSNB compared with acupuncture, placebo or steroid injections. For other commonly used interventions no or only limited evidence of effectiveness was found. Most of the included studies reported short-term results, whereas symptoms of frozen shoulder may last up to 4 years. High quality RCTs studying long-term results are clearly needed in this field.