CRD summary
This review evaluated the effect of cryotherapy on return to participation after injury. Participation was defined as a return to sporting activity or to work. The authors concluded that cryotherapy may have a positive effect on return to participation. However, the limitations of the review and poor quality of the included studies make the reliability of the results uncertain.

Authors' objectives
To determine the effect of cryotherapy on return to participation after injury.

Searching
MEDLINE, CINAHL, PEDro, SPORTDiscus and the Cochrane Database of Systematic Reviews were searched for studies reported in English (1976 to 2003); the search terms were reported. The reference lists of retrieved articles were also checked.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were eligible for inclusion.

Specific interventions included in the review
Studies of cryotherapy were eligible for inclusion. The included studies compared cryotherapy with heat therapy, bandaging, air-stirrup bracing, or no ice treatment.

Participants included in the review
There were no inclusion criteria relating to the participants. All included studies involved patients with ankle sprains.

Outcomes assessed in the review
The primary outcome was return to participation, defined as a return to sporting activity or to work.

How were decisions on the relevance of primary studies made?
The authors did not state how studies were selected for the review, or how many reviewers performed the study selection.

Assessment of study quality
Study quality was assessed using the PEDro scale, which assesses randomisation, similarity at baseline, blinding, drop-outs, statistical methods used and reporting of results. The scale gives a score between 0 and 10. Three reviewers independently assessed study quality, with consensus being reached.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
A narrative synthesis was presented.
How were differences between studies investigated?
Heterogeneity was not formally assessed.

Results of the review
Four RCTs (n=161) were included in the review.

Out of a possible 10 points for quality, one RCT scored 2, two scored 3 and one scored 4.

Two of the four RCTs reported a faster return to participation with cryotherapy compared with either heat therapy or crepe bandage alone. One of these RCTs also reported that cryotherapy given immediately was more effective than when given later. The other two RCTs reported no significant difference between groups.

Authors' conclusions
Cryotherapy may have a positive effect on return to participation, but further research is necessary.

CRD commentary
The review question was clear in terms of the intervention, outcomes and study design. However, there were no stated inclusion criteria relating to the participants. Several relevant sources were searched, although only English language studies were sought and no attempts were made to identify unpublished studies; language bias and publication bias may therefore be present. The authors did not assess the potential for publication bias. Study quality was assessed in duplicate, but it was unclear whether similar methods were used during the study selection and data extraction. These steps of the review may therefore be prone to error and bias. Since the studies located by the reviewers were published between 1976 and 1993, the methods evaluated, either as interventions or comparators, may now be out of date.

Adequate details of the included studies were presented. The included studies were of poor quality, and only two of the four included in the review reported positive results attributed to cryotherapy. The limitations of the review and poor quality of the included studies make the reliability of the results uncertain.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that RCTs on the effect of cryotherapy on clinically relevant outcomes are lacking and that good-quality RCTs examining return to participation are required.

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.