

EXERCISE FOR TREATING ANTERIOR CRUCIATE LIGAMENT INJURIES IN COMBINATION WITH COLLATERAL LIGAMENT AND MENISCAL DAMAGE OF THE KNEE IN ADULTS

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Cochrane Database of Systematic Reviews, Issue 08, 2011 (Status in this issue: WITHDRAWN FROM PUBLICATION FOR REASONS STATED IN THE REVIEW)

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DOI: 10.1002/14651858.CD005961.pub3

This review should be cited as: Trees Amanda H, Howe Tracey E, Grant Margaret, Gray Heather G. Exercise for treating anterior cruciate ligament injuries in combination with collateral ligament and meniscal damage of the knee in adults. Cochrane Database of Systematic Reviews. In: *The Cochrane Library*, Issue 08, Art. No. CD005961. DOI: 10.1002/14651858.CD005961.pub3

ABSTRACT

Background

The anterior cruciate ligament (ACL) is the most frequently injured ligament of the knee. The ACL may be damaged in isolation but often other ligaments and menisci are implicated. The injury may be managed surgically or conservatively. Injury causes pain, effusion and inflammation leading to alteration in muscle function. Regaining muscular control is essential if the individual wishes to return to pre-injury level of function and patients will invariably be referred for rehabilitation.

Objective

To present the best evidence for effectiveness of exercise used in the treatment of ACL injuries in combination with collateral ligament and meniscal damage to the knee in adults, on return to work and pre-injury levels of activity.

Criteria for considering studies for this review

We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (October 2006), Cochrane Central Register of Controlled Trials (The Cochrane Library 2006, Issue 3), MEDLINE (1996 to October 2006), EMBASE (1980 to October 2006), other databases and reference lists of articles.

Selection criteria

We included randomised controlled trials and quasi-randomised trials testing exercise programmes designed to treat adults with ACL injuries in combination with collateral ligament and meniscal damage. Included trials randomised participants to receive any combination of the following: no care, usual care, a single-exercise intervention, and multiple-exercise interventions. The primary outcome measures of interest were returning to work and return to pre-injury level of activity post treatment, at six months and one year.

Data collection and analysis

Two authors independently assessed trial quality and extracted data. Study authors were contacted for additional information. Adverse effects information was collected from the trials.

Main results

Five trials (243 participants) evaluated different exercise programmes following ACL reconstruction and one trial (100 participants) compared supervised with self-monitored exercises as part of conservative treatment. No study compared the effect of exercise

versus no exercise. Methodological quality scores varied considerably across the trials; participant and assessor blinding were poorly reported. Pooling of data was rarely possible due to the wide variety of comparisons, outcome measures and time points reported, and lack of appropriate data. Insufficient evidence was found to support the efficacy of one exercise intervention over another.

Authors' conclusions

This review has demonstrated an absence of evidence to support one form of exercise intervention over another. Further research should be considered in the form of large scale well-designed and well-reported randomised controlled trials with suitable outcome measures and surveillance periods. Suitable outcome measures should include a measure of functional outcome relevant to the individual.
