

# PHYSIOTHERAPIST-LED PROGRAMMES AND INTERVENTIONS FOR REHABILITATION OF ANTERIOR CRUCIATE LIGAMENT, MEDIAL COLLATERAL LIGAMENT AND MENISCAL INJURIES OF THE KNEE IN ADULTS

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## ABSTRACT

### Background

Soft-tissue injuries of the knee, mainly involving the anterior cruciate ligament (ACL), the medial collateral ligament (MCL) and menisci, are common and their rehabilitation after non-surgical or surgical treatment often involves intensive and prolonged physiotherapy.

### Objective

To examine the evidence for effectiveness of various physiotherapist-led (or 'directed') rehabilitation programmes, and of various interventions used within these programmes, for rehabilitation of acute or chronic ACL, MCL or meniscal injuries of the knee in adults.

### Criteria for considering studies for this review

We searched the Cochrane Musculoskeletal Injuries Group's specialised register (to June 2001), MEDLINE (from 1966 to August 1999), EMBASE (from 1980 to February 1997), CINAHL (1982 to April 1999), CURRENT CONTENTS (up to March 1999) and reference lists of relevant articles, and consulted colleagues. Date of the most recent search: June 2001.

### Selection criteria

Randomised or quasi-randomised clinical trials evaluating physiotherapist-led rehabilitation programmes, or components of rehabilitation programmes, for the treatment or post-surgical rehabilitation of ACL, MCL or knee meniscal injuries. Excluded were trials investigating electrical stimulation, or various interventions such as cryotherapy, immobilisation braces and continuous passive motion when used in initial or early treatment. Laboratory based trials reporting intermediate outcomes were also excluded.

### Data collection and analysis

All trials, judged as fitting the selection criteria by two reviewers, were independently assessed by two reviewers for methodological quality by use of an 11 item checklist. Data were independently extracted by two reviewers. Any disagreement was resolved by discussion. Although quantitative data from most trials are presented, using relative risks or mean differences together with 95 per cent confidence intervals, trial heterogeneity and lack of outcome data prevented meaningful pooling of results from comparable trials.

## **Main results**

Thirty-one trials, involving 1545 mainly young and male patients, met the inclusion criteria of the review. Methodological quality was highly variable: allocation concealment and / or assessor blinding were rare, and assessment of outcome was often incomplete and short-term. ACL injury and /or deficiency was the main focus of 18 trials, MCL injury of two trials, meniscal injury of nine trials and a mixture of soft-tissue injuries in the other two trials. The trial comparisons fell into five main categories: rehabilitation programme versus control (6 trials); one rehabilitation programme versus another (6 trials); different timing of rehabilitation (4 trials); one component of a programme versus another (6 trials); supplementary interventions to a programme versus none (9 trials). No trial provided sufficient evidence to establish the relative effectiveness of the intervention(s) under investigation.

## **Authors' conclusions**

The available evidence for physiotherapist-led rehabilitation of ACL, MCL and meniscal injuries is wide ranging in terms of scope but insufficient to establish the relative effectiveness of the various approaches and methods in current use. There is a need for further research involving good quality, large scale randomised trials with sufficiently long follow-up to fully assess knee function and recovery.

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