



Article Appraisal

Article: Effect of early supervised physiotherapy on recovery from acute ankle sprain: randomized controlled trial
Brison RJ, Day AG Pelland L, Pickett W, Johnson AP, Aiken A, Pichora DR, Brouwer B. Effect of early supervised physiotherapy on recovery from acute ankle sprain: randomised controlled trial. *BMJ*. 2016 Nov 16;355:i5650. doi: 10.1136/bmj.i5650.

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Background and Study Objective(s):

Previous studies have been inconclusive in determining the role of supervised physiotherapy in the management of simple Grade 1 and 2 ankle sprains. This study sought to determine whether supervised physiotherapy as recommended to adult patients presenting to ED with Grade 1 and 2 ankle sprains would lead to improved functional outcomes at 1,3 and 6 months post-injury vs usual care alone (conservative treatment as recommended by EP). The goal of this trial was to design a RCT that was sufficiently powered to limit bias.

Study Design:

Parallel group randomized controlled trial of adults presenting to one of two emergency departments in Kingston, Ontario with simple ankle sprains.

Results:

1969 patients presented to the emergency department with ankle sprains over the study period. 504 of these were randomized, with 254 in the physiotherapy group and 250 in the usual care arm. At 6 months follow up, Foot and Ankle Outcome Scores (FAOS) were obtained from 208 patients in the physiotherapy arm and 195 from the usual care arm. An intention to treat and per-protocol analysis was completed. Results demonstrated no clinically significant difference in: FAOS > 450 and secondary outcomes at 1, 3, and 6 months, and no difference in both total and domain-specific continuous FAOS.

Validity of Results:

The consensus among JC attendees was that the study addressed a clear question, was sufficiently powered, and was adequately randomized and blinded to further limit bias. The study groups were similar at the start of the study, were treated equally aside from the intervention, and all study participants were accounted for at the conclusion of the study through both intention-to-treat and per-protocol analysis. The treatment effect was precise and the study number large enough to be applicable to a general ED population.

Generalizability of Results:

Though the study number was theoretically large enough to be applied to a general ED population, patients were only enrolled from 2 tertiary care centers in the same city, thus possibly limiting external validity. Furthermore, although this study employed a standardised plan based on current evidence for the physiotherapy group, there was some discussion that not all physiotherapists and physiotherapy treatment plans are equal. Incorporation of more proprioception training, for example, might lead to a decreased incidence of repeat injury. Some also argued that physiotherapy is a good option for patients who fail conservative management, and this data was not captured in this study. A multi-centre study with subjects recruited from more than one city would represent a heterogeneous population, and treatment by multiple physiotherapists and different treatment plans with subgroup analysis would make the results more generalizable.

The Bottom Line:

There is no evidence to support a clinically important improvement in outcome with the addition of supervised physiotherapy in a general population of patients seeking hospital based acute care for simple ankle sprains. This study was not practice-changing for those EPs who currently do not recommend PT for Grade 1 and 2 sprains, although many said that they would still refer certain patients such as high level athletes, those failing initial conservative management, or those with a repeat ankle injury. For others who currently refer all their patients with ankle sprains for physiotherapy, this study would change practice by discouraging such a referral in the future.