

Malliaropoulos N, Papalexandris S, et al. The role of stretching in rehabilitation of hamstring injuries: 80 athletes follow-up. Medicine and Science in Sports and Exercise 2004;36(5):756–9.

Design: randomized clinical trial

Purpose of study: to compare two different levels of intensity of stretching rehabilitation in elite athletes with acute hamstring injuries

Reasons not to cite as evidence:

- The participants were 80 athletes who visited the medical center of the Greek Athletic Federation, but there is very little additional information about the inclusion and exclusion criteria
 - o “Free medical history for hamstring, lumbar spine, or lower extremity injuries was the major inclusive criterion.”
 - o This does not make it clear whether any history of a lower extremity injury (for example, an injury to the opposite leg several years earlier) was an exclusion criterion
- The interventions are clear enough to be satisfactory: adequately described stretching exercises once a day in a less intensive rehabilitation group and the same exercises four times per day in the more intensive group
- The outcomes are of questionable relevance and clarity, especially the second outcome of “time for full, unrestricted athletic activities” which has no criteria by which to classify an athlete as participating in full, unrestricted activity
- There are threats to internal validity which would place the study at a high risk of bias and would rate it as of low methodological quality
 - o The method of randomization is not given
 - o The issue of allocation concealment is not mentioned or described
 - o The outcomes assessments are not stated to be blinded, and are sufficiently vulnerable to observer bias to be of questionable validity
- The effect sizes, though achieving low p values, are not impressive
 - o Return to normal values of range of motion was 5.6 days in the more intensive rehabilitation group and 7.3 days in the other group
 - o Return to unrestricted athletic participation was 13.3 days for the more intensive group and 15 days for the less intensive group
- Evidence of effectiveness of any rehabilitation program for injured workers is not supported by this study