



Differences in muscle strength in dominant and non-dominant leg in females aged 20-39 years--a population-based study.

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Author: Katharina Lanshammar
Eva L Ribom

Author Affiliation: Physiotherapy Ward, University Hospital, Entrance 85, s-751 85 Uppsala, Sweden.

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Abstract: In sports medicine, muscle strength and joint flexibility of the contralateral limb is used as a rehabilitation goal for the injured extremity. The present study was designed to determine whether side differences in hamstrings and quadriceps muscle strength, or in the ratio between hamstrings and quadriceps strength (H:Q), might be of clinical importance.

Cross-sectional study in a randomly selected, population-based cohort.

University hospital in Uppsala. Quadriceps and hamstrings strength was assessed by maximum isokinetic concentric contractions at an angular velocity of 90°/s.

A sample of 159 randomly selected women from Uppsala county population registers, aged 20-39 years, was included in the study.

Peak isokinetic concentric torques of the quadriceps and hamstrings, and the corresponding H:Q ratios.

In this cohort of non-athletes the muscle strength in the dominant leg was on average 8.6% (p 0.001) in the non-dominant leg.

Our study shows that in a population-based sample of women there is a significant asymmetry in leg muscle strength favouring non-dominant leg flexion and dominant leg extension. In this study the H:Q ratio was therefore substantially lower in the dominant leg. Whether this should influence rehabilitation goals must be further investigated.

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