ABSTRACT

Background: The Nordic hamstring exercise (NHE) is an effective strategy to prevent hamstring strain injuries in soccer players. The current literature recommends a 10-week training program with three sessions per week, but the short preseason period and the congested schedule make difficult for high-performance soccer teams to apply the NHE as recommended.

Purpose: The purpose of this study was to examine the effect of a pragmatic NHE training program during a four-week preseason period on eccentric knee flexor strength of high-performance soccer players.

Study design: Quasi-experimental clinical trial.

Methods: This study included 25 under-20 male soccer players from a premier league club. They performed eight sessions of NHE (3 sets of 6-10 repetitions, twice a week) during the four-week preseason period. The eccentric knee flexor strength was evaluated during the NHE execution on a custom-made device, before and after the training program.

Results: The NHE training program significantly increased the players' eccentric knee flexor strength in both right (Δ = 13%; p < 0.001; effect size = 0.97) and left limbs (Δ = 13%; p < 0.001; effect size = 0.92). Individual analysis identified 76% of the players as responders to the NHE training program (Δ = 16%; effect size = 1.60), and 24% as non-responders (Δ = 3%; effect size = 0.24).

Conclusion: A four-week training program with NHE performed twice a week is feasible in the real-world of high-performance soccer clubs and increases the eccentric knee flexor strength of male soccer players.

Keywords: Eccentric training, Football, Injury prevention, Sports physical therapy.

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