

Copenhagen adduction exercise to increase eccentric strength: A systematic review and meta-analysis

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Background: The purpose of this study was to systematically review the scientific literature about the benefits of using the Copenhagen Adductor (CA) exercise to improve eccentric hip adduction strength (EHAD), as well as to provide directions for training. **Methods:** A systematic search was conducted in three electronic databases following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The inclusion criteria were: (a) EHAD as outcome variable, with means and standard deviations before and after the intervention, (b) the study was a randomized controlled trial using the CA in the program intervention, (c) the article was written in English. The quality of evidence was evaluated according to the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) guidelines. A mini meta-analysis was performed to determine the overall effect. **Results:** Three studies were selected and included in this systematic review and mini meta-analysis. All articles reported significant enhancement in EHAD in football (soccer) players. The overall effect for the EHAD test was significant in favor to CA group (mean difference = 0.61; 95% CI from 0.20 to 1.01; $p = 0.003$) with large heterogeneity.

Conclusions: CA exercise performed 2-3 times for 8 weeks is useful for improving EHAD in football players. © 2020 by the authors.

Football

Groin injuries

Hip adduction strength

Injury prevention

Soccer