

INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Effects of Core strength training on physical fitness among players in sports: A systematic Review

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Review question / Objective: This study aims to investigate the effect of core strength training on physical fitness among players in sports. Does core strength training have a positive effect on the physical fitness of adolescent athletes (amateur or professional)? Does core strength training positively affect the physical fitness of female adolescent athletes (amateur or professional)? Does core strength training three times per week for 12 weeks positively affect the physical fitness of female adolescent athletes (amateur or professional)? What specific core strength exercises are used to positively affect the physical fitness of female adolescent athletes (amateur or professional)? Can the Abdominal strength test of the control group and the experimental group explain the impact of core strength training on female adolescent athletes (amateur or professional)?

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 March 2023 and was last updated on 17 March 2023 (registration number INPLASY202330059).

INTRODUCTION

Review question / Objective: This study aims to investigate the effect of core strength training on physical fitness among players in sports. Does core strength training have a positive effect on the physical fitness of adolescent athletes (amateur or professional)? Does core

strength training positively affect the physical fitness of female adolescent athletes (amateur or professional)? Does core strength training three times per week for 12 weeks positively affect the physical fitness of female adolescent athletes (amateur or professional)? What specific core strength exercises are used to positively affect the physical fitness of

female adolescent athletes (amateur or professional)? Can the Abdominal strength test of the control group and the experimental group explain the impact of core strength training on female adolescent athletes (amateur or professional)?

Condition being studied: Physical Education.

METHODS

Participant or population: Healthy player.

Intervention: All exercises included in the Core Strength Training Program.

Comparator: Core Strength Training.

Study designs to be included: Systematic review

Eligibility criteria: Inclusion criteria: Healthy player, All exercises included in the Core Strength Training Program; Active or passive control group; At least one measure related to physical fitness (abdominal strength, endurance and flexibility, etc.) before and after the core strength training intervention; exclusion criteria: duplicates were removed, not full text, Review, conference paper, book chapter, dissertation, magazines, not in English and Mandarin, not relevant, not healthy players, not core strength training, not physical fitness components, not intervention.

Information sources: Scopus; CNKI; PUBMED; Web of Science; Google Scholar.

Main outcome(s): Studies about men were more than women, studies about adults were more than adolescents, studies about professional athletes were more than amateur athletes; interventions used 12-week cycles most, core strength training was more significant than core strength training combined with other training methods; Among them, in test aspects, Speed test > Flexibility test > Endurance test > Balance test > Abdominal strength test; the final research results show that

core strength training has a strong positive relationship with the physical fitness of professional athletes and amateur athletes.

Quality assessment / Risk of bias analysis: Pedro scale.

Strategy of data synthesis: A total of 310 documents were found by searching keywords in the five databases of Scopus, CNKI, PUBMED, Web of Science and Google scholar. They are, Scopus: (n=121), CNKI: (n=30), PUBMED : (n=37), Web of Science: (n=122), 12 articles were finally identified. By dividing the age, height, weight, gender, participant type, training cycle, training frequency, training time, and main training items, main tests, and specific test content of the participants in the experimental group and the control group in the 12 articles, and finally get the result.

Subgroup analysis: None.

Sensitivity analysis: None.

Country(ies) involved: China.

Keywords: core strength training; physical fitness; players; sports.

Contributions of each author:

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