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None declared.

Effect of Core Training on Skill Performance among Athletes: A Systematic Review

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Review question / Objective: **This systematic review aimed is to clarify the effects of core training on skill performance among athletes.**
Condition being studied: **Sports training field. Conceptually, core strength originated from the research on core stability, and its application was mainly focused on human rehabilitation. Until the late 1990s, scholars applied the strength training of core muscles to competitive sports. Currently, core training has received more and more attention to improve athlete's performance.**
Information sources: **This review used four international databases to search literature including, Ebscohost, Scopus, PubMed, Web of Science, and Google Scholar by December 2021. The main keywords used in the retrieval process were: ("Core Strength Training" OR "Trunk Training" OR "Core training" OR "Postural Stability Training" OR "Core-Stability Exercise" OR "Core Exercise") AND ("Skill" OR "Skill Performance" OR "Sport Skill Performance" OR "Sport Technology").**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 December 2021 and was last updated on 26 December 2021 (registration number INPLASY2021120120).

INTRODUCTION

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METHODS

Participant or population: Healthy players in any sport fields.

Intervention: Core training.

Comparator: The Control group was using traditional training methods or routine training.

Study designs to be included: Single-group trails or Randomized Controlled TrialsThe study used PICO as the inclusion criteria for these searched articles. For a study to be eligible, each of the following inclusion criteria was met:1. Articles must be experimental studies focusing on core strength training and basketball players' athletic and skill performance.2. The population must be healthy basketball players, regardless of age and gender.3. The core strength training as the intervention was involved, core strength training can be carried out on stable or unstable surfaces with unarmed or instruments, and the p.

Eligibility criteria: Articles must be experimental studies focusing on core training and players' skill performance. The population must be healthy players, regardless of age and gender. Core training must be involved and isolated and the training period can not less than four weeks. The outcome of the articles must include the effect of core training on the at least oneplayers' skill performance.

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Main outcome(s): Core training could improve shooting, passing skills in basketball and football. In other sports, the effect of core training is also obvious that improving 50m freestyle swimming, shooting velocity, shooting accuracy in swimming, handball and badminton.

Quality assessment / Risk of bias analysis: This review used the PEDro scale to assess each study.

Strategy of data synthesis: The initial search of 378 publications produced 340 usable articles. This number was after deleting duplicate articles by the Endnote software, followed by the second round of deletion, including 5 articles with no full-text, 15 articles not in English, 105 articles not from journals, and 1 article in English unpublished location. In the third screening step, 214 full-text articles were assessed for eligibility. Among these 214 articles, 186 unrelated articles were deleted according to the topic and abstract, and the remaining 11 articles were carefully excluded. Finally, there were 17 relevant articles that satisfied the inclusion criteria and were included in the qualitative synthesis.

Subgroup analysis: This review following PICO table to analyze and summarize each study.

Sensitivity analysis: This review used the PEDro scale to assess each study.

Country(ies) involved: China and Malaysia.

Keywords: core training; sport performance; athletes.

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