

INPLASY PROTOCOL

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Effect of Post-activation potentiation on Sports Performance of Athletes: A Systematic Review

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Review question / Objective: This study aims to investigate the effect of post-activation potentiation (PAP) on athletic performance in sports.

Eligibility criteria: (1) The study population must include professionally trained and amateur-trained personnel who are healthy, regardless of gender or age. (2) Post-activation potentiation should be isolated and discussed explicitly, with PAP in the experimental group and other training methods or no training in the control group. (3) This study's Comparisons should be single-group or multiple-group trials. (4) The study's results must include at least one post-activation enhancement effect on athletes' sports performance. (5) Inclusion of the literature requires that the experimental designs are all RCT.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 March 2023 and was last updated on 29 March 2023 (registration number INPLASY202330120).

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Support: None.

Review Stage at time of this submission: Formal screening of search results against eligibility criteria.

Conflicts of interest:

None declared.

INTRODUCTION

Review question / Objective: This study aims to investigate the effect of post-activation potentiation (PAP) on athletic performance in sports.

Condition being studied: Compared to traditional training, post-activation potentiation is a new dynamic warm-up

method that can significantly improve athletes' sports performance, including power, endurance, speed, and jumping ability.

METHODS

Participant or population: (1) The study population must include professionally trained and amateur-trained personnel who

are healthy, regardless of gender or age.(2) Post-activation potentiation should be isolated and discussed explicitly, with PAP in the experimental group and other training methods or no training in the control group.(3) This study's Comparisons should be single-group or multiple-group trials.(4) The study's results must include at least one post-activation enhancement effect on athletes' sports performance.(5) Inclusion of the literature requires that the experimental designs are all RCT.

Intervention: Post-activation potentiation was the main intervention.

Comparator: None.

Study designs to be included: Randomized controlled trials (RCTs) will be included.

Eligibility criteria: (1) The study population must include professionally trained and amateur-trained personnel who are healthy, regardless of gender or age.(2) Post-activation potentiation should be isolated and discussed explicitly, with PAP in the experimental group and other training methods or no training in the control group. (3) This study's Comparisons should be single-group or multiple-group trials.(4) The study's results must include at least one post-activation enhancement effect on athletes' sports performance.(5) Inclusion of the literature requires that the experimental designs are all RCT.

Information sources: Ebscohost, Scopus, PubMed, Web of Science, and Google Scholar.

Main outcome(s): Power test, speed test, endurance test, agility test, flexibility test, jumping ability test after Post-activation potentiation.

Quality assessment / Risk of bias analysis: Data from all studies were scored on a PEDro scale of three to five. All studies were penalized for criteria involving concealment of assignments, blinded participants, evaluators, therapists, and intent for a treatment analysis. Because the intervention is strength training and comes

with the risk of professionalism and sports injuries, it is challenging to blind participants, evaluators, and therapists. However, research can ensure that all subjects receive treatment. Two reviewers will independently assesses.

Strategy of data synthesis: None.

Subgroup analysis: None.

Sensitivity analysis: None.

Language restriction: English.

Country(ies) involved: China.

Keywords: post-activation potentiation, sports performance, athletes.

Contributions of each author:

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