

# INPLASY PROTOCOL

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**Support:** None to declare.

**Review Stage at time of this  
submission:** Preliminary  
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**Conflicts of interest:**  
None declared.

## Effect of dietary supplements on athletic performance in elite soccer players: a systematic review

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**Review question / Objective:** The aim of this systematic review is to evaluate the effect of dietary supplements on athletic performance in elite soccer players.

**Eligibility criteria:** This review will be conducted based on the PRISMA guidelines and the PICOS approach. Articles were eligible if they were published or in-press in peer-reviewed journals (i.e., abstracts published in conference proceedings, books, theses, and dissertations will not be considered), published in English language with available abstract for screening. The PICOS approach will be established as follows: Population: highly trained or elite, adult (>18 years old) male or female soccer players; Intervention: use of one or more dietary supplements for performance; Comparison: same conditions with placebo or without dietary supplements; Outcome: athletic or soccer-related performance outcomes; Study design: intervention in parallel groups or with crossover, blind or double-blind, and randomized controlled trials (experimental studies).

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 June 2022 and was last updated on 22 June 2022 (registration number INPLASY202260088).

### INTRODUCTION

**Review question / Objective:** The aim of this systematic review is to evaluate the effect of dietary supplements on athletic performance in elite soccer players.

**Condition being studied:** Soccer-specific performance indicators after interventions with dietary supplements.

### METHODS

**Search strategy:** Clinical studies enrolling elite soccer players in interventions using dietary supplements were searched in MEDLINE/PubMed, Web of Science, Scopus and EBSCO databases during June 2022 using specific Medical Subject Headings (MeSH terms) and keywords: (supplement\*) AND (diet\* OR nutr\*) AND

(soccer OR football) AND (performance OR exercis\* OR fitness OR capacit\*). The search was restricted to peer-reviewed articles in English. There was no limit on dates of publication.

**Participant or population:** Highly trained, elite or world class, adult (>18 years old) male or female player's (i.e., player's competing at the international leagues/tournaments; player's competing in national and/or state leagues/tournaments; individuals on a national team).

**Intervention:** With isolated or combined dietary supplements for athletic performance.

**Comparator:** Same conditions with placebo or without dietary supplements.

**Study designs to be included:** Blind or double-blind, randomized controlled trials.

**Eligibility criteria:** This review will be conducted based on the PRISMA guidelines and the PICOS approach. Articles were eligible if they were published or in-press in peer-reviewed journals (i.e., abstracts published in conference proceedings, books, theses, and dissertations will not be considered), published in English language with available abstract for screening. The PICOS approach will be established as follows: Population: highly trained or elite, adult (>18 years old) male or female soccer players; Intervention: use of one or more dietary supplements for performance; Comparison: same conditions with placebo or without dietary supplements; Outcome: athletic or soccer-related performance outcomes; Study design: intervention in parallel groups or with crossover, blind or double-blind, and randomized controlled trials (experimental studies).

**Information sources:** MEDLINE/PubMed, Web of Science, Scopus and EBSCO.

**Main outcome(s):** Athletic or soccer-related performance outcomes (e.g.: sprint time, time to exhaustion, reaction time, jumping performance, ...).

**Quality assessment / Risk of bias analysis:** Considering the type of studies to be included, revised Cochrane risk of bias tool for randomized trials (RoB2) or the version for crossover trials will be applied.

**Strategy of data synthesis:** For the included papers, we will consider information about: (1) authors, year of publication; (2) population (age, sex and level); (3) sample size; (4) region; (5) type of study design; (6) supplementation protocol (substance or nutrient, dose and duration); (7) Exercise test; and (8) synthesis of main findings.

**Subgroup analysis:** None.

**Sensitivity analysis:** None.

**Language:** English.

**Country(ies) involved:** Portugal.

**Keywords:** Dietary Supplements, Soccer, Nutrition, Performance.

**Contributions of each author:**

Author 1 - Rodrigo Abreu - Research idea and study design, data extraction, analysis and interpretation, and writing – original draft and editing.

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