

# INPLASY

## Relationship between Obstructive Sleep Apnea and Sport - Systematic Review and Meta-Analysis

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### ADMINISTRATIVE INFORMATION

**Support** - None.

**Review Stage at time of this submission** - The review has not yet started.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202450139

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 31 May 2024 and was last updated on 31 May 2024.

### INTRODUCTION

**Review question / Objective** To analyze and compare the effect of sport on patients with obstructive sleep apnea.

**Condition being studied** Is there any relationship between obstructive sleep apnea and sport?

### METHODS

**Participant or population** Patients with obstructive sleep apnea and practicing sport.

**Intervention** Patients with obstructive sleep apnea and practicing sport.

**Comparator** Apnea-hipoapnea index (AHI).

**Study designs to be included** Prospective and retrospective randomized clinical trials retrospective and transversal observational studies.

**Eligibility criteria** The inclusion criteria will be as follows: Studies registered in impact journals and databases such as prospective and retrospective randomized clinical trials (RCT) with a small-time range referred to obstructive sleep apnea and its relationship with sport (last ten years) and with a somewhat larger range to contrast what refers to the changes of this condition, diagnostic methods and related aspects. In addition, the search for articles will be carried out in both Spanish and English, the latter having a greater weight due to the greater number of studies and information that exists in this language. Studies were not restricted by language or year of publication. The exclusion criteria were as follows: systematic literature

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reviews, systematic literature reviews, clinical cases, cases series, and editorials. The following data will be recorded: author, year, title, journal, sample size (n). The results obtained from studies that analyzed the relationship between physical exercise and improvement in OSA patients.

**Information sources** An electronic search will be carried out using the following databases: PubMed, Scopus, Cochrane, and Web of Sciences.

**Main outcome(s)** An aerobic exercise program combined with Resistance exercises, produce an improvement in apnea-hypopnea indices.

**Quality assessment / Risk of bias analysis** The quality assessment will be performed through JADAD scale/ Risk of bias analysis will be analyzed by Trim and Fill analysis.

**Strategy of data synthesis** Data related to Apnea-hipoapnea index (AHI) will be registered, recorded and measured through the random effects model.

**Subgroup analysis** Analysis of subgroups will not be performed.

**Sensitivity analysis** Sensitivity analysis will be assessed through the One Study Removed.

**Country(ies) involved** Spain.

**Keywords** Obstructive sleep apnea; sport; exercise; physical activity; fitness.

#### **Contributions of each author**

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