

Effects of inspiratory muscle training in patients with obstructive sleep apnea: A systematic review

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Introduction: Obstructive Sleep Apnea Syndrome (OSAS) is characterized as an upper airway breathing disorder, and the increasing number of people diagnosed with the condition has been alarming, as it is related to the patient's predisposition to develop other health problems, mainly related to the cardiovascular system, being associated with increased mortality. The use of Continuous Positive Airway Pressure (CPAP) is considered the gold standard in the treatment of OSAS. However, recent studies show the effects of Inspiratory Muscle Training (IMT) as an effective therapy option for people with OSAS. **Objective:** This systematic review (SR) aimed to evaluate the most recent studies on the effects of an Inspiratory Muscle Training (IMT) program on the clinical evolution of people with mild and moderate OSAS. **Methods:** Randomized clinical trials for SR were extracted from different electronic databases (VHL Portal, PubMed and PEDRro), with searches carried out using combinations of Boolean operators (AND and OR), using the PICOS search strategies: patients with OSAS, an IMT program, clinical evolution of mild and moderate OSAS, sedentary lifestyle. The PEDro scale was used to analyze methodological quality. Among the eligibility criteria it included adult patients (aged \geq 50 years), a randomized clinical trial design, patients undergoing an IMT program who did not practice another type of physical exercise, and who had a diagnosis of mild and moderate OSAS. **Results:** 6 articles were included, published between 2016 and 2023. There was significance in some outcomes: AHI and ESS scores (both $P < 0.05$) decreased by 6% and 20.2%, respectively. A baseline AHI \geq 29.0/h, IMT group (sensitivity 77.8%; specificity 85.7%). HR in the TMI group was lower 1 h after the session compared to pre-session values ($p = 0.002$). HR was lower after the first hour, pre ($p < 0.001$) and immediate post ($p < 0.001$). Even though in some studies, the improvement is not always based on quantitative data, in all of them the improvement in quality of life is evident, especially in those with mild OSA. **Conclusion:** The results obtained strengthen the idea that IMT can be an alternative therapy for patients with OSAS, as its effects bring clinical improvement (signs and symptoms), positively impacting quality of life.