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# Effects of Obstructive Sleep Apnea and CPAP on Cognitive Function

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## Abstract

**Purpose of review:** Obstructive sleep apnea (OSA) is characterized by repetitive episodes of complete or partial upper airway obstruction during sleep. Studies indicate that OSA is an independent risk factor for cognitive decline in older patients. The purpose of this paper is to critically review the recent literature on the cognitive effects of untreated OSA and the benefits of treatment across cognitive domains.

**Recent findings:** OSA's greatest impact appears to be on attention, vigilance, and information processing speed. Furthermore, the presence of OSA seems to have a significant impact on development and progression of mild cognitive impairment (MCI). Impact of OSA treatment, particularly with CPAP, appears to mitigate and slow the rate of cognitive decline and may reduce the risk of dementia. Larger properly controlled studies, of a prospective nature, are required to further elucidate the degree of treatment effect. More studies are needed on other treatments for OSA such as oral mandibular devices and hypoglossal nerve stimulation.

**Keywords:** Attention; Cognition; Continuous positive airway pressure (CPAP); Executive function; Memory; Obstructive sleep apnea.

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