

Neuropsychological sequelae of obstructive sleep apnea-hypopnea syndrome: a critical review.

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Obstructive sleep apnea-hypopnea syndrome (OSAHS) is a well-recognized clinical sleep disorder that results in chronically fragmented sleep and recurrent hypoxemia. The primary daytime sequelae of the disorder include patient reports of excessive daytime sleepiness, depression, and attention and concentration problems. It has been well established that OSAHS negatively impacts certain aspects of cognitive functioning. The primary goals of this article are to (1) clarify the pattern of cognitive deficits that are specific to OSAHS; (2) identify the specific cognitive domains that improve with treatment; and (3) elucidate the possible mechanisms of cognitive dysfunction in OSAHS. At the conclusion of the paper, we propose a potential neurofunctional theory to account for the etiology of cognitive deficits in OSAHS. Thirty-seven peer-reviewed articles were selected for this review. In general, findings were equivocal for most cognitive domains. Treatment, however, was noted to improve attention/vigilance in most studies and consistently did not improve constructional abilities or psychomotor functioning. The results are discussed in the context of a neurofunctional theory for the effects of OSAHS on the brain.

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