

[J Sleep Res.](#) 2002 Sep;11(3):265-72.



[Links](#)

## Measures of cognitive function in persons with varying degrees of sleep-disordered breathing: the Sleep Heart Health Study.

[Boland LL](#), [Shahar E](#), [Iber C](#), [Knopman DS](#), [Kuo TF](#), [Nieto FJ](#); [Sleep Heart Health Study \(SHHS\) Investigators](#).

Division of Epidemiology, School of Public Health, University of Minnesota, Minneapolis, MN 55454, USA.

Epidemiologic literature suggests that persons with clinically diagnosed sleep apnoea frequently have impaired cognitive function, but whether milder degrees of sleep-disordered breathing (SDB) are associated with cognitive dysfunction in the general population is largely unknown. Approximately 1700 subjects free of clinically diagnosed SDB underwent at-home polysomnography (PSG) as part of the Sleep Heart Health Study (SHHS) and completed three cognitive function tests within 1-2 years of their PSG: the Delayed Word Recall Test (DWR), the WAIS-R Digit Symbol Subtest (DSS), and the Word Fluency test (WF). A respiratory disturbance index (RDI) was calculated as the number of apnoeas and hypopnoeas per hour of sleep. After adjustment for age, education, occupation, field centre, diabetes, hypertension, body-mass index, use of CNS medications, and alcohol drinking status, there was no consistent association between the RDI and any of the three cognitive function measures. There was no evidence of a dose-response relation between the RDI and cognitive function scores and the adjusted mean scores by quartiles of RDI never differed from one another by more than 5% for any of the tests. In this sample of free-living individuals with mostly mild to moderate levels of SDB, the degree of SDB appeared to be unrelated to three measures of cognitive performance.

PMID: 12220323 [PubMed - indexed for MEDLINE]