

# Poor Sleep May Signal Dementia in Older Vets

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COPENHAGEN -- Disturbed sleep was a significant and independent risk factor for subsequent development of dementia among U.S. military veterans, according to a large registry study reported here.

With adjustments for education, history of traumatic brain injury, cardiovascular diseases, and other potential confounders, veterans 55 and older with any type of sleep disturbance were 30% more likely to be diagnosed with new-onset dementia during the following 8 years (hazard ratio 1.30, 95% CI 1.24-1.38), relative to those without sleep problems, according to [Kristine Yaffe, MD](#), of the University of California San Francisco, and colleagues.

The retrospective study could not establish a causal relationship, and Yaffe -- speaking at a press briefing held at the [Alzheimer's Association International Conference](#) before her formal presentation -- stopped short of saying that treatment for sleep abnormalities could mitigate dementia risk.

She said "more research is needed" to determine whether disturbed sleep contributes to dementia -- or, for that matter, whether sleep abnormalities are caused by, or part of a prodromal form of dementia.

But the association does mean that sleep problems may help identify older veterans at increased risk for developing dementia, Yaffe said.

She also noted that a causal relationship in which sleep-disordered breathing contributes to cognitive decline makes biological sense. Such problems reduce blood oxygenation that, in turn, may diminish brain function, she said.

Previous studies have also [linked poor sleep with dementia](#), but Yaffe noted that her group's was the first to examine the relationship in a population of veterans and with such a large sample size.

The current study involved analysis of records of some 192,000 veterans, more than 95% male, 55 and older who could be tracked in the Department of Veterans Affairs (VA) for 8 years and who did not carry a diagnosis of dementia at baseline.

Yaffe and colleagues identified those with sleep disturbances at baseline by the presence of ICD-9 codes in the 780.5 group, including codes for sleep apnea or non-apnea insomnia. About 7.5% of the cohort had some type of sleep disturbance, about evenly divided between sleep apnea and non-apnea insomnia.

Adjustments were taken for income, education, diabetes, hypertension, obesity, depression, and history of myocardial infarction as well as traumatic brain injury (TBI).

A Kaplan-Meier curve showed that, by age 90, the proportion of veterans still free of dementia was notably smaller among those with baseline sleep disturbance (about 65% compared with 75% of the other veterans).

Overall, 10.6% of the sleep-disturbed veterans received a dementia diagnosis during follow-up, compared with 9.0% of the veterans with normal sleep at baseline.

The increased risk seen across all types of sleep disturbance was also present separately for sleep apnea and non-apnea insomnia, both of which had hazard ratios close to 1.3 for subsequent development of dementia compared with veterans without baseline sleep-related diagnoses.

Yaffe and colleagues also found that sleep disturbances predicted increased likelihood of most forms of dementia, most strongly for Lewy body dementia, for which the HR was 2.05 (95% CI 1.59-2.62).

History of TBI did not affect the relationship significantly, nor did a diagnosis of post-traumatic stress disorder (PTSD).

But the researchers found that veterans who had PTSD along with disturbed sleep appeared to be at relatively high risk for dementia (HR 1.80, 95% CI 1.01-3.21), although the wide confidence interval precluded a firm conclusion on that point.

Limitations to the study included its retrospective design and reliance on VA records for all data.