

# A good night's sleep could keep you out of a nursing home

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Tired? Scientists have discovered another possible benefit of a night of restful and uninterrupted sleep. According to a new study led by researchers at the Johns Hopkins Bloomberg School of Public Health fragmented or interrupted sleep could predict future placement in a nursing home or assisted living facility. The study is featured in the July 2012 issue of the *Journal of the American Geriatrics Society* and outlines the association between objectively measured sleep and subsequent institutionalization among older women.

"[Sleep disturbances](#) are common in older people," said Adam Spira, PhD, lead author of the study and an assistant professor with the Bloomberg School's Department of Mental Health. "Our results show that in community-dwelling [older women](#), more fragmented [sleep](#) is associated with a greater risk of being placed in a nursing home or in a [personal care](#) home. We found that, compared to women with the least fragmented sleep, those who spent the most time awake after first falling asleep had about 3 times the odds of placement in a nursing home. Individuals with the lowest sleep [efficiency](#)—those who spent the smallest proportion of their time in bed actually sleeping—also had about 3 times the odds of nursing home placement." The authors found similar patterns of associations between disturbed sleep and placement in personal care homes, such as assisted-living facilities. Sleep duration per se did not predict placement in either of these settings.

According to the Centers for Disease Control and Prevention, insufficient sleep is associated with a number of chronic diseases and

conditions—such as diabetes, cardiovascular disease, obesity and depression. In addition, insufficient sleep is associated with the onset of many diseases and is responsible for motor vehicle and machinery-related crashes. Previous studies have also linked disturbed sleep with disability in older adults and impairment in activities of daily living and mobility.

Using a prospective cohort study, researchers measured the sleep of women with a mean age of 83 years old from the Study of Osteoporotic Fractures. Participants were asked to wear actigraphs on their non-dominant wrists for at least three days. These devices record movement, and the resulting data can be used to characterize patterns of sleep and wake. Demographic information as well as place of residence at initial interview and at 5-year follow-up was also provided. Although several prior studies had investigated the link between sleep disturbance and nursing home placement, those studies asked participants questions about sleep rather than collecting objective sleep data.

"Despite the growing literature on sleep disturbance and disability, prior to our research very little was known about the association between sleep disturbance in older adults and risk of placement in long-term care facilities. Greater sleep fragmentation is associated with greater risk of placement in a nursing home or personal care home 5 years later after accounting for a number of potential confounders," said Kristine Yaffe, MD, senior author of the study, and professor of Psychiatry, Neurology, and Epidemiology and Biostatistics at the University of California, San Francisco.

Spira adds, "It's important to remember that this is an observational study, so our findings cannot demonstrate a conclusive causal link between sleep disturbance and [placement](#) in long-term care facilities. We need more research to explain how sleep disturbance might lead to this outcome, and whether interventions to improve sleep might prevent it."

**More information:** "Objectively Measured Sleep Quality and Nursing Home Placement in Older Women," *Journal of the American Geriatrics Society*.

Provided by Johns Hopkins University Bloomberg School of Public Health

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