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# Sleep Medicine

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## Letter to the Editor

### Insufficient sleep associated with increased breast cancer mortality

#### To the Editor

Sleep disturbance increases the risk for breast cancer. For example, Kazizaki et al. [1] reported that women with short sleep duration had a higher risk of breast cancer, compared to women who slept 7 hours per day. However, little is known about sleep disturbance and breast cancer mortality. In our analysis, we assessed the risk of breast cancer death associated with insufficient sleep.

Age adjusted data on sleep disturbance in the 50 states in the United States as well as the District of Columbia are from perceived insufficient rest or sleep among adults – United States, 2008 [2]. Age adjusted breast cancer mortality is from American Cancer Society Cancer Facts and Figures [3]. Data on race by state are from the 2010 US census.

There was a significant correlation between percentage of persons who reported insufficient sleep everyday in the preceding 30 days versus breast cancer mortality in the 50 states in the United States as well as the District of Columbia ( $p = 0.013$ ). Because breast cancer survival is higher in white women than black women [4], multiple linear regression was performed. The association of insufficient sleep everyday in the preceding 30 days with breast cancer mortality was significant ( $p = 0.01$ ) and unrelated to the percentage in the white population ( $p = 0.114$ ).

Studies suggest that melatonin is involved in the relationship of sleep and breast cancer, and melatonin exerts an antiproliferative effect on breast cancer cells [5]. Moreover, breast cancer has become more prevalent for reasons that are poorly understood. Likewise, prevalence of sleeping difficulties and sleepiness has increased; whereas, sleep duration per night has decreased. These sleep aberrations may be putting more women at risk for death from breast cancer.

#### Conflict of Interest

The ICMJE Uniform Disclosure Form for Potential Conflicts of Interest associated with this article can be viewed by clicking on the following link: <http://dx.doi.org/10.1016/j.sleep.2012.10.012>.

## References

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