

# Better sleep predicts longer survival time for women with advanced breast cancer

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A new study reports that sleep efficiency, a ratio of time asleep to time spent in bed, is predictive of survival time for women with advanced breast cancer.

Results show that higher sleep efficiency was significantly associated with lower mortality over the ensuing six years, an effect that remained after adjusting for baseline prognostic factors such as age, estrogen receptor status and treatments received. Mean survival was 68.9 months for efficient sleepers compared with 33.2 months for participants with poor sleep efficiency. Further analysis found that a 10 percent increase in [sleep efficiency](#) reduced the estimated hazard of subsequent mortality by 32 percent. There was no association between [sleep duration](#) and survival.

"We were surprised by the magnitude of the relationship between [sleep quality](#) and overall survival even after we accounted for medical and psychological variables that typically predict survival," said lead author Oxana Palesh, PhD, assistant professor in the Department of Psychiatry and Behavioral Sciences at Stanford University and research director of the Stanford Cancer Survivorship. "Good sleep seems to have a strongly protective effect, even with advanced [breast cancer](#)."

Study results are published in the May 1 issue of the journal *Sleep*.

The study involved 97 women with advanced breast [cancer](#) who had a mean age of 55 years. Objective sleep parameters were measured by

wrist actigraphy for three consecutive days. Overall, participants spent about eight hours in bed at night but slept for only about 6.5 hours.

"This study emphasizes the importance of assessing sleep quality among women with breast cancer," said American Academy of Sleep Medicine President Dr. M. Safwan Badr. "Healthy sleep is critical for physical health, quality of life and overall well-being."

According to the authors, this is the first study to demonstrate the long-term detrimental effects of objectively quantified sleep on survival in women with advanced cancer. Although the mechanism of the relationship between sleep quality and [advanced breast cancer](#) survival is unclear, they suggested that [sleep disruption](#) may lead to diminished immune function or impaired hormonal stress responses that are more directly responsible for the decrease in survival.

The authors also noted that further research is needed to replicate this finding using a prospective, controlled, experimental design to determine whether improving sleep can improve survival.

"There are effective treatments for sleep disruption in the general population, and some of them have shown to be effective in cancer survivors as well," said Paresh. "But much more research is needed to develop and test interventions that are adapted for cancer patients and survivors. These interventions might not only improve quality of life, but can potentially improve survival."

**More information:** "Actigraphy-Measured Sleep Disruption as a Predictor of Survival among Women with Advanced Breast Cancer," *Sleep*, 2014. [www.journalsleep.org/ViewAbstract.aspx?pid=29448](http://www.journalsleep.org/ViewAbstract.aspx?pid=29448)

Provided by American Academy of Sleep Medicine

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