

# Healthy sleep habits help lower risk of heart failure

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Adults with the healthiest sleep patterns had a 42% lower risk of heart failure regardless of other risk factors compared to adults with unhealthy sleep patterns, according to new research published today in the American Heart Association's flagship journal *Circulation*. Healthy sleep patterns are rising in the morning, sleeping 7-8 hours a day and having no frequent insomnia, snoring or excessive daytime sleepiness.

Heart failure affects more than 26 million people, and emerging evidence indicates sleep problems may play a role in the development of [heart](#) failure.

This observational study examined the relationship between healthy sleep patterns and heart failure and included data on 408,802 UK Biobank participants, ages 37 to 73 at the time of recruitment (2006-2010). Incidence of heart failure was collected until April 1, 2019. Researchers recorded 5,221 cases of heart failure during a median follow-up of 10 years.

Researchers analyzed sleep quality as well as overall sleep patterns. The measures of sleep

quality included sleep duration, insomnia and snoring and other sleep-related features, such as whether the participant was an early bird or night owl and if they had any daytime sleepiness (likely to unintentionally doze off or fall asleep during the daytime).

"The healthy sleep score we created was based on the scoring of these five sleep behaviors," said Lu Qi, M.D., Ph.D., corresponding author and professor of epidemiology and director of the Obesity Research Center at Tulane University in New Orleans. "Our findings highlight the importance of improving overall sleep patterns to help prevent heart failure."

Sleep behaviors were collected through touchscreen questionnaires. Sleep duration was defined into three groups: short, or less than 7 hours a day; recommended, or 7 to 8 hours a day; and prolonged, or 9 hours or more a day.

After adjusting for diabetes, hypertension, medication use, genetic variations and other covariates, participants with the healthiest sleep pattern had a 42% reduction in the risk of heart failure compared to people with an unhealthy sleep pattern.

They also found the risk of [heart failure](#) was independently associated and:

- 8% lower in early risers;
- 12% lower in those who slept 7 to 8 hours daily;
- 17% lower in those who did not have frequent insomnia; and
- 34% lower in those reporting no daytime sleepiness.

Participant sleep behaviors were self-reported, and the information on changes in sleep behaviors during follow-up were not available. The researchers noted other unmeasured or unknown

adjustments may have also influenced the findings.

Qi also noted that the study's strengths include its novelty, prospective study design and large sample size.

First-author is Xiang Li, Ph.D.; other co-authors are Qiaochu Xue, M.P.H.; Mengying Wang, M.P.H.; Tao Zhou, Ph.D.; Hao Ma, Ph.D.; and Yoriko Heianza, Ph.D. Author disclosures are detailed in the manuscript.

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