

Sleep apnea linked with higher spine fracture risk among women

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Illustration of obstruction of ventilation. Credit: Habib M'henni / public domain

Emerging evidence suggests that obstructive sleep apnea (OSA) may

negatively affect bone health. Results from a new study published in the *Journal of Bone and Mineral Research* now indicate that women with history of OSA may face a higher risk of spine, or vertebral, fractures.

Using information from the Nurses' Health Study, investigators examined data pertaining to 55,264 women without a prior history of bone fractures. OSA was self-reported in 1.3% of participants in 2002 and increased to 3.3% by 2012. Between 2002 and 2014, 461 [vertebral fractures](#) and 921 hip fractures occurred.

Women with a history of OSA had a 2-fold higher risk of vertebral fracture relative to those with no OSA history, with the strongest association observed for OSA associated with daytime sleepiness. No association was observed between OSA history and risk of hip fracture.

"Our study provides important evidence at the population level that [obstructive sleep apnea](#) may have an adverse impact on [bone health](#) that is particularly relevant to the development of vertebral fracture," said lead author Tianyi Huang, ScD, of Brigham and Women's Hospital. "Given that we used self-reported clinical diagnoses of sleep apnea and fracture in our study, future studies could use more deeply characterized data to further the understanding of the mechanisms linking sleep apnea to bone health and fracture risk."

More information: *Journal of Bone and Mineral Research* (2020). onlinelibrary.wiley.com/doi/10.1002/jbmr.4127

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