

# Obstructive sleep apnea associated with less visceral fat accumulation in women than men

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A new study from researchers in Japan indicates that obstructive sleep apnea (OSA) is independently associated with visceral (abdominal) fat accumulation only in men, perhaps explaining gender differences in the impact of OSA on cardiovascular disease and mortality.

"Visceral fat accumulation, which is a risk factor for cardiovascular disease, is also associated with OSA, and [gender differences](#) in mortality related to [sleep apnea](#) have been reported in some studies. Accordingly, we examined if the relationship between OSA and visceral fat accumulation differed by gender," said Drs. Yuka Harada, MD and Kazuo Chin MD.PhD, of the Kyoto University Graduate School of Medicine. "We found that visceral fat accumulation was associated with OSA in men, but not in women."

The study results will be presented at the ATS 2013 International Conference in Philadelphia.

The study enrolled 271 male and 100 female patients who were evaluated for OSA between October 2008 and December 2010.

[Body mass index](#) (BMI) and [waist circumference](#) were similar in men and women. Compared with women, men had greater visceral fat accumulation, more severe OSA, and more severe dyslipidemia.

Statistical analyses of the relationships between OSA and fat accumulation revealed that in men, age, BMI, and two indicators of OSA

(minimum [oxygen saturation](#) during sleep and alveolar-arterial oxygen difference) were independently associated with visceral fat accumulation, while in women, only BMI was associated with visceral fat accumulation.

Measurements of subcutaneous fat were related to BMI in both men and women, but were not related to OSA parameters.

"The complex relationship between OSA and obesity is well documented," said Drs Harada and Chin. "If our findings that visceral fat accumulation is associated with OSA only in men are confirmed in further studies, it may help in the development of new prognostic tools and treatment approaches in this population."

Provided by American Thoracic Society

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