

# Asthma associated with increased risk of obstructive sleep apnea

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Children with asthma use inhalers to relieve some of their symptoms, which include coughing, wheezing, chest tightness and shortness of breath. Credit: Tradimus / Wikimedia commons / [CC BY-SA 3.0](#)

Participants in a sleep study who had asthma had an increased risk for developing obstructive sleep apnea, with this association stronger with having had asthma longer, according to a study in the January 13 issue of *JAMA*.

In adults, [obstructive sleep apnea](#) (OSA) is highly and increasingly prevalent, and is associated with adversely affecting health and a higher risk of death. Although a few studies have suggested an asthma-OSA association, it has been unknown whether asthma is a causal risk factor for OSA, according to background information in the article.

Mihaela Teodorescu, M.D., M.S., of the William S. Middleton Memorial Veteran's Hospital, and the University of Wisconsin School of Medicine and Public Health, Madison, Wisc., and colleagues examined the relationship between asthma and new OSA in the Wisconsin Sleep Cohort Study, which consists of randomly selected adult employees of state agencies, 30 to 60 years of age in 1988. Since study inception, participants have attended in-laboratory overnight polysomnography and provided health-related questionnaires approximately every 4 years. Eligible participants were identified as free of OSA at study entry.

Twenty-two of 81 participants (27 percent) with asthma experienced incident OSA over their first observed 4-year follow-up intervals vs 75 of 466 participants (16 percent) without asthma. Using all available 4-year intervals (i.e., including multiple 4-year interval observations per participant), participants with asthma experienced 45 incident OSA cases during 167 4-year intervals (27 percent) and [participants](#) without asthma experienced 160 incident OSA cases during 938 4-year intervals (17 percent). Participants with preexisting asthma had a nearly 40 percent increased risk for new OSA compared with those without asthma.

Asthma duration was related to both new OSA and new OSA with habitual sleepiness (defined as answering often [5-15 times a month], and almost always [>15 times a month] to the question "Do you have feelings of excessive daytime sleepiness").

"This study prospectively examined the relationship of asthma with OSA

assessed with laboratory-based polysomnography and found that preexistent asthma was a risk factor for the development of clinically relevant OSA in adulthood over a 4-year period. Furthermore, the asthma-OSA association was significantly dose-dependent on duration of asthma," the authors write.

"Studies investigating the mechanisms underlying this association and the value of periodic OSA evaluation in patients with [asthma](#) are warranted."

**More information:** *JAMA*, [DOI: 10.1001/jama.2014.17822](https://doi.org/10.1001/jama.2014.17822)

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