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Independent association between obstructive sleep apnea severity and glycated hemoglobin in adults without diabetes

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Auteur	Priou, Pascaline [1], Le Vaillant, Marc [2], Meslier, Nicole [3], Chollet, Sylvaine [4], Masson, Philippe [5], Humeau, Marie P [6], Pigeanne, Thierry [7], Bizieux-Thaminy, Acya [8], Goupil, François [9], Gagnadoux, Frédéric [10], IRSR Sleep Cohort Group, [11]
Pays	Etats-Unis
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Résumé en anglais	**OBJECTIVE:** We tested the hypothesis of an independent cross-sectional association between obstructive sleep apnea (OSA) severity and glycated hemoglobin (HbA(1c)) in adults without known diabetes. **RESEARCH DESIGN AND METHODS:** HbA(1c) was measured in whole-blood samples from 2,139 patients undergoing nocturnal recording for suspected OSA. Participants with self-reported diabetes, use of diabetes medication, or HbA(1c) value ≥6.5% were excluded from this study. Our final sample size comprised 1,599 patients. **RESULTS:** A dose-response relationship was observed between apnea-hypopnea index (AHI) and the percentage of patients with HbA(1c) >6.0%, ranging from 10.8% for AHI <5 to 34.2% for AHI ≥50. After adjustment for age, sex, smoking habits, BMI, waist circumference, cardiovascular morbidity, daytime sleepiness, depression, insomnia, sleep duration, and study site, odds ratios (95% CIs) for HbA(1c) >6.0% were 1 (reference), 1.40 (0.84-2.32), 1.80 (1.19-2.72), 2.02 (1.31-3.14), and 2.96 (1.58-5.54) for AHI values <5, 5 to <15, 15 to <30, 30 to <50, and ≥50, respectively. Increasing hypoxemia during sleep was also independently associated with the odds of HbA(1c) >6.0%. **CONCLUSIONS:** Among adults without known diabetes, increasing OSA severity is independently associated with impaired glucose metabolism, as assessed by higher HbA(1c) values, which may expose them to higher risks of diabetes and cardiovascular disease.
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