

Sleep Watchers

Summer 2021

Dear Colleague,

We hope this quarter's newsletter finds everyone in good health and spirits. As always we genuinely appreciate your support and look forward to continuing to help you improve the quality of life for your patients.

Please let us know if you would like to see a specific topic covered in our next issue. It is our goal to provide as much information as possible to better serve your patients. We appreciate the trust you place in us by allowing us to participate in the care of your patients.

Best Regards,

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wake patterns and academic achievement have not been established. This pre-, post-, and longitudinal non-randomized study included an early (8:00 am; ESC=30 students) and the late (9:00 am; LSC=21 students) start class. Multiple sleep data included a weekly sleep diary, Karolinska Sleepiness Scale, Pittsburgh Sleep Quality Index, and Epworth Sleepiness Scale. Sustained attention was measured using the Psychomotor Vigilance Task. Academic performance was evaluated by two different mathematical and scientific standard tests (entrance and final) and by school attendance indicators. Data were collected at monthly intervals from October 2018 to May 2019 and the beginning and end of the academic year (pre/post).

All students turned their lights off at similar times (LSC=11:21pm, ESC=11:11pm), but LSC students woke up later (7:23am) than ESC students (6:55am) on school days. The groups did not differ in total sleep duration on non-school days. Longitudinal measures revealed a significant increase (8.9%, 34 min) in total sleep duration of LSC students across the academic year. ESC students maintained approximately the same sleep duration. Furthermore, changes in sleep duration had paralleled significant differences in sustained attention, with LSC students outperforming ESC students. Longitudinal changes of sleep and sustained attention were associated with a coherent pattern of changes in academic performance. *Findings indicate that a one-hour delay in school start time is associated with longer sleep, better diurnal sustained attention, attendance, and improved academic performance. Notably, sleep changes were limited to school days. A delay in school start time should be seriously considered to improve sleep and academic achievements of students.*

The Association Between School Start Time and Sleep Duration, Sustained Attention, and Academic Performance

Valentina Alfonsi, Rossella Palmizio, et al.
Nat Sci Sleep 2020 Dec 10;12:1161-1172

In adolescence, physiological (circadian and homeostatic regulation of sleep) and social habits contribute to delayed sleep onset, while social obligations impose early sleep offset. The effects of delayed school start time on the subjective/objective measures of sleep-



Obstructive Sleep Apnea Treatment and Dementia Risk in Older Adults

G L Dunietz, R D Chervin, et al.
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The purpose of this study was to examine associations between PAP therapy, adherence and incident diagnoses of Alzheimer's disease (AD), mild cognitive impairment (MCI), and dementia not-otherwise-specified (DNOS) in older adults. This study utilized Medicare 5% fee-for-service

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Obstructive Sleep Apnea...continued

claims data of 53,321 beneficiaries, aged 65+, with an OSA diagnosis prior to 2011. Study participants were evaluated using ICD-9 codes for neurocognitive syndromes [AD(n=1,057), DNOS(n=378), and MCI(n=443)] that were newly-identified between 2011-2013. PAP treatment was defined as presence of ≥ 1 durable medical equipment (HCPCS) code for PAP supplies. PAP adherence was defined as ≥ 2 HCPCS codes for PAP equipment, separated by ≥ 1 month. Statistical models, adjusted for demographic and health characteristics, were used to estimate associations between PAP treatment or adherence and new AD, DNOS, and MCI diagnoses.

In this sample of Medicare beneficiaries with OSA, 59% were men, 90% were non-Hispanic whites and 62% were younger than 75y. The majority (78%) of beneficiaries with OSA were prescribed PAP (treated), and 74% showed evidence of adherent PAP use. PAP treatment was associated with lower odds of incident diagnoses of AD and DNOS. *Lower odds of MCI, approaching statistical significance, were also observed among PAP users. PAP adherence was associated with lower odds of incident diagnoses of AD. PAP treatment and adherence are independently associated with lower odds of incident AD diagnoses in older adults. Results suggest that treatment of OSA may reduce risk of subsequent dementia.*

sex, and obesity status. OSA prevalence is as high as 40% to 80% in patients with hypertension, heart failure, coronary artery disease, pulmonary hypertension, atrial fibrillation, and stroke. Despite its high prevalence in patients with heart disease and the vulnerability of cardiac patients to OSA-related stressors and adverse cardiovascular outcomes, OSA is often underrecognized and undertreated in cardiovascular practice.

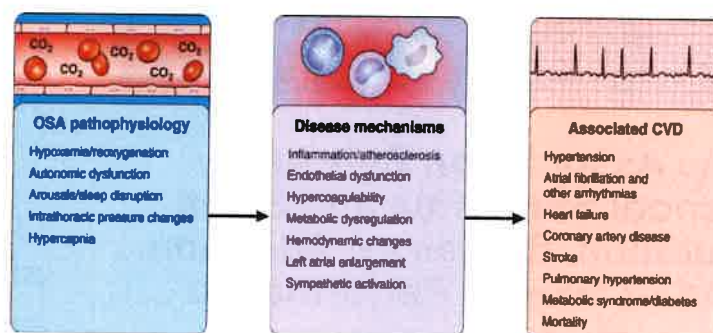
The authors recommend screening for OSA in patients with resistant/poorly controlled hypertension, pulmonary hypertension, and recurrent atrial fibrillation after either cardioversion or ablation. In patients with New York Heart Association class II to IV heart failure and suspicion of sleep-disordered breathing or excessive daytime sleepiness, a formal sleep assessment is reasonable. In patients with tachy-brady syndrome or ventricular tachycardia or survivors of sudden cardiac death in whom sleep apnea is suspected after a comprehensive sleep assessment, evaluation for sleep apnea should be considered. After stroke, clinical equipoise exists with respect to screening and treatment. Patients with nocturnally occurring angina, myocardial infarction, arrhythmias, or appropriate shocks from implanted cardioverter-defibrillators may be especially likely to have comorbid sleep apnea.

The authors conclude that all patients with OSA should be considered for treatment, including behavioral modifications and weight loss as indicated. Continuous positive airway pressure should be offered to patients with severe OSA, whereas oral appliances can be considered for those with mild to moderate OSA or for continuous positive airway pressure-intolerant patients. Follow-up sleep testing should be performed to assess the effectiveness of treatment.

Obstructive Sleep Apnea and Cardiovascular Disease: A Scientific Statement From the American Heart Association

Yerem Yeghiazarians, Hani Jneid, et al.
21 Jun 2021 *Circulation*. 2021;144-57

O bstructive sleep apnea (OSA) is characterized by recurrent complete and partial upper airway obstructive events, resulting in intermittent hypoxemia, autonomic fluctuation, and sleep fragmentation. Approximately 34% and 17% of middle-aged men and women, respectively, meet the diagnostic criteria for OSA. Sleep disturbances are common and underdiagnosed among middle-aged and older adults, and the prevalence varies by race/ethnicity,



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